164
469281
S.C
PV.

VOLUME VII.

TRANSCRIPT OF RECORD

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1941

No. 265

FEDERAL POWER COMMISSION AND ILLINOIS COMMERCE COMMISSION, PETITIONERS

vs.

NATURAL GAS PIPELINE COMPANY OF AMERICA AND TEXOMA NATURAL GAS COMPANY

No. 268

NATURAL GAS PIPELINE COMPANY OF AMERICA AND TEXOMA NATURAL GAS COMPANY, PETITIONERS

vs.

FEDERAL POWER COMMISSION AND ILLINOIS COMMERCE COMMISSION

ON WRITS OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SEVENTH CIRCUIT

Petitions for certiorari filed July 12, 1941, July 14, 1941

Certiorari granted October 13, 1941

IN THE

United States Circuit Court of Appeals
For the Seventh Circuit

No. 7454

NATURAL GAS PIPELINE COMPANY OF AMERICA
AND TEXOMA NATURAL GAS COMPANY,
Petitioners,

vs.

FEDERAL POWER COMMISSION AND ILLINOIS
COMMERCE COMMISSION,
Respondents.

Petition for Review of Interim Order of the Federal Power Commission.

INDEX.

Petition of the Illinois Commerce Commission, filed with the Federal Power Commission, September 23, 1938 1
Order of Federal Power Commission instituting Investigation, entered October 14, 1938..... 6
Answer of Natural Gas Pipeline Company of America and Texoma Natural Gas Company to Petition, filed November 16, 1938..... 9
Order fixing date of hearing, entered April 14, 1939... 13

PROCEEDINGS AT HEARING.

Statement by Examiner..... 15
Statement by Mr. Morgan..... 16
Colloquy 25, 33, 64
Statement by Mr. Booth..... 28
Statement by Mr. May..... 31

ABSTRACT OF TESTIMONY.

Witnesses for Federal Power Commission.

Testimony of:
Brown, Claude C.....35, 36
Knapp, Charles W., Jr.....2004, 2103, 2588
Smith, Charles W.....2041, 2222, 2632

Witnesses for Illinois Commerce Commission.

Testimony of:
Kleinman, Fred 2075, 2382
Ostrander, E. D.....1977, 2277
Woodford, John M.....57, 393

Vol. I, pp. 1 to 646; Vol. II, pp. 647 to 1310; Vol. III, pp. 1311 to 1976; Vol. IV, pp. 1977 to 2672; Vol. V, pp. 2673 to 3032; Vol. VI, pp. 3033 to 3417; Vol. VII, pp. 3418 to 3902; Vol. VIII, pp. 3903 to 4022.

WITNESSES FOR DEFENDANTS.

Testimony of:

Biddison, P. McDonald.....1041, 1284
Brainard, W. F.....481
Brown, Floyd C.....491, 1311, 1636
Bulla, W. T.....987
Bussard, R. M.....715, 854, 1056
Campbell, S. E.....1003, 1398, 2554, 2637
Cooke, John A.....1446, 1909, 2616, 2669
Cottingham, V. E.....187
Davidson G. M.....1013, 1040, 1068, 1142
Davidson, W. H.....815
Delafield, Robert H.....1415, 1753, 2558, 2657
Dickinson, J. G.....613, 874, 1379
Dorau, H. B.....1512, 1636, 1788, 1965, 2527
Eastman, H. L.....1210
Emery, J. A.....1324, 1451, 1638, 1690, 1927
Foster, M. E.....1110
Galloup, Charles I.....453
Gill, Stanley.....361, 1024
Gillman, William C.....
.....1471, 1678, 1702, 1867, 2469, 2600, 2671
Hamilton, F. C.....1191, 1271
Hammerschmidt, E. G.....465
Hughes, C. Don.....315
Kesinger, E. V.....647, 2596
Miller, S. L.....1340, 1383
Palyi, Melchoir.....398
Parker, R. D.....249
Peterson, C. J.....192, 359
Powers, R. T.....767

Testimony of:

Smith, W. D. 1119
Solow, E. M. 1167; 1859
Stoddart, Frank W. 1259
Strong, R. G. 903
Taubman, Herman P. 1148, 1190
Thompson, J. D., Jr. 275
Wallace, R. J. 1341
Willard, J. L. 1240
Zwiener, K. V. 1367

EXHIBITS.

No.

3 Production and B.T.U. by Fields Texoma Company for year ending June 30, 1938 (F. P. C.) ..2673
4 Gas sold or delivered, Texoma Company for year ending June 30, 1938 (F. P. C.) 2674
5 Texoma Company Consolidated Operating Analysis, etc. (F. P. C.) 2675
6 Texoma Company earnings analysis, 1934 to 1938, inc. (F. P. C.) 2676
7 Natural Gas Company gas sold or delivered by companies for year ending June 30, 1938 (F. P. C.) 2677
8 Natural Gas Company report of purchased gas and cost, 1934 to 1938, inc. (F. P. C.) 2679
9 Natural Gas Company consolidated operating analysis of gas purchases and sales, 1934 to 1938, inc. (F. P. C.) 2681
10 Natural Gas Company Sales and Revenue, 1934 to 1938, inc. (F. P. C.) 2683
11 Natural Gas Company Sales Agreements on file with Federal Power Commission (F. P. C.) 2685

Vol. I, pp. 1 to 646; Vol. II, pp. 647 to 1310; Vol. III, pp. 1311 to 1976; Vol. IV, pp. 1977 to 2672; Vol. V, pp. 2673 to 3031; Vol. VI, pp. 3032 to 3417; Vol. VII, pp. 3418 to 3902; Vol. VIII, pp. 3903 to 4022.

No.	Exhibits.	
14	Map showing delivery points and Natural Gas Transmission Lines (F. P. C.)	2687
15	Natural Gas Company and Texoma Company Earnings Statements, Calendar Years to December 31, 1938 (I. C. C.)	2689
28	Natural Gas Reserves — Texas Panhandle (Defts.)	2756
36	Natural Gas Reserves — Texas Panhandle (Defts.)	2757
41	Natural Gas Reserves — Texas Panhandle (Defts.)	2759
43	Explanation of Reserve Calculations (Defts.)	2760
44	Details of Reserve Estimate Marginal Gas Acreage—Texas Panhandle Field (Defts.)	2767
53	Errata—Exhibit No. 15 (I. C. C.)	2771
54	Natural Gas Company and Texoma Company Balance Sheets, December 31, 1934 to 1938, inc. (I. C. C.)	2771
78	Picture showing assembly of two 18-inch gas lines upon a suspension bridge across Big Blue River in Moore County, Texas (Defts.)	2783
79	Two photographs: Canadian River crossing in Hutchinson County, Texas, and typical manifold for submerged river crossing (Defts.)	2785
84	Map showing distances of Panhandle, Michigan and Illinois Fields from Chicago (Defts.)	2787
85	Photographs of Scenes at Pipeline Break near Sheffield, Illinois (Defts.)	2789
86	Statement of Open Flows and Rock Pressures on Date Wells were abandoned. Eldorado & Augusta Fields—Butler County, Kansas (Defts.)	2801

Vol. I, pp. 1 to 646; Vol. II, pp. 647 to 1310; Vol. III, pp. 1311 to 1976; Vol. IV, pp. 1977 to 2672; Vol. V, pp. 2673 to 3031; Vol. VI, pp. 3033 to 3417; Vol. VII, pp. 3419 to 3908; Vol. VIII, pp. 3908 to 4062.

No.	Exhibits.	
92	Picture of Compressor Station No. 1 (Defts.)	2803
114	Regulatory Expense (Defts.)	2805
116	General Expense, Taxes, New Business Expense (Defts.)	2806
117	Summary of Additional Capital Expenditures and Operation and Maintenance (Defts.)	2819
122	Salvage Value as of December 31, 1954 (Defts.)	2841
	Non-Salvageable Property not listed in Exhibit 122	1143
123	Picture Showing Interior of Fritch Station and 12 Engines (Defts.)	2907
124	Errata Sheets for Exhibit 122 (Defts.)	2911
125	Volumes I and II of Valuation (Portions of) (Defts.)	2922
129	Personnel Data—Key men in Chicago Office, etc. (Defts.)	2927
130	Cost of Attaching Business (Defts.)	2943
131	Market Value of Leases (Summary Sheet) (Defts.)	2947
132	Quotations and Yields of U. S. Treasury Notes and Bonds at Close of Market on August 15, 1939 (Defts.)	2951
133	Average Yield obtainable from Investments in U. S. Notes and Bonds (Defts.)	2953
134	Explanation of Method Used in Determining Reserves as of 8/1/31, on Acreage owned by Texoma 1/1/39 (Defts.)	2955
136	Earnings Statements for Calendar Years 1932 to 1938, inclusive (Defts.)	2958
137	Balance Sheets and Statements of Plant and Equipment December 31, 1931 to December 31, 1938, inclusive (Defts.)	2989

No.	Exhibits.	
138	Statement of Operating Revenue and Expenses, etc. (Defts.)	3003
140	Earnings Statement covering entire life of Project (Defts.)	3021
141	Earnings Statement based on Book Cost as of January 1, 1939 (Defts.)	3025
142	Earnings Statement based on Reproduction Cost new less existing depreciation as of June 1, 1939 (Defts.)	3029
145	Reconciliation of Statement Included in Exhibits 136 and 15 (Defts.)	3033
146	Texoma Natural Gas Company Summary of Market Value of Leases (Defts.)	3069
147	Natural Gas Co. and Texoma Co. Data concerning Rate of Return, etc. (Defts.)	3071
148	Natural Gas Co. and Texoma Co. Data concerning Rate of Return—Year 1938 (Defts.)	3079
149	Estimated Earnings on Account of Increased Capacity and Delivery of Natural Gas when operating at Higher Pipe Stresses (Defts.)	3105
150	Natural Gas Co. and Texoma Co. Data concerning Rate of Return (Defts.)	3106
151	Photostat of Investment Treatises (Defts.)	3123
152	Natural Gas Co. and Texoma Company Data concerning Rate of Return (Defts.)	3141
154	Article by Paul Ryan, "The Natural Gas Industry an Expanding Service" (F. P. C.)	3305
155	Facing Sheet and Pages 4 and 5 from 1st amendment to Registration Statement of Public Service Co. of Colorado, filed with S. E. C. 12/10/38 (F. P. C.)	1880, 3314

No.	Exhibits.
156	Certified copy of Gallagher's Exhibits 2 and 2A covering estimate of Investment and Anticipated Average Annual Net Earnings relative Docket 21170 before Illinois Commerce Commission (I. C. C.) 3320
	Exhibit 2—Estimate of Investment in Facilities for Production of Natural Gas in Texas, etc. 3321
	Exhibit 2A—Revised page 1 of Exhibit 2... 3333
157	Certified copy of Gallagher's testimony before Illinois Commerce Commission in connection with Exhibit 2 of Commerce Commission and covering Pages 12 to 99, inc. of record in case No. 21170 (I. C. C.) 3335
158	Facing Sheet and Page 62 from 1st amendment to Registration Statement of Public Service Co. of Colorado filed with S. E. C. 12/10/38 (F. P. C.) 3374
159	Facing Sheet and Pages 5 and 6 from Registration Statement of Public Service Company of Colorado filed with S. E. C. 8/30/39 (F. P. C.)... 3379
160	Facing Sheet and Page 57 of Registration Statement of Public Service Company of Colorado filed with S. E. C. 8/30/39 (F. P. C.)..... 3385
161	Release No. 1667 of S. E. C. under Holding Company Act containing findings and opinion re Northern Natural Gas Co. (F. P. C.)..... 1884, 3390
162	Letter of Ralph E. Davis, Inc. to Northern Natural Gas Co. dated 6/1/39 re Natural Gas Reserves (F. P. C.)..... 1885, 3401

No.	Exhibits.
163	Pages 8, 9, 10 from Registration Statement filed with S. E. C. by Panhandle Eastern Pipeline Co. covering Ralph E. Davis Production Property and Gas Reserves (I. C. C.).....3408
167	Exhibit 49 in case of Chgo. District Pipeline Co. v. Lindheimer, et al., comparing present market price of issuance of Natural Gas Bonds (F. P. C.).....3413
168	Poor's Public Utility Volume 1939—Pages 164-167, inclusive (F. P. C.).....3419
169	Pages a55 to a61, inclusive of Moody's Manual of Investments 1939 (F. P. C.).....3428
170	Page 250 from American Gas Association Monthly, August, 1939, "Expanding Markets for Gas Industry Make Investments Sound," by P. S. Young (F. P. C.).....3458
171	Pages 19-20-37 from "Gas"—July, 1939, article by Percy S. Young entitled "The Investment Attributes of Gas Utility Securities" (F. P. C.).3460
172	Pages 251-255 of American Gas Association Monthly issue of July-August, 1939, article, "A Banker Analyzes Natural Gas Industry Investment Values," by Frank R. Denton (F. P. C.)..3468
173	Pages 37, 38, 43 of "Gas," May, 1939, issue, article, "A Stock Broker Analyzes the Natural Gas Industry," by John Nickerson III (F. P. C.)....3471
174	Pages 56-61, incl. from 1939 Autumn issue of "The Index" article, "The Gas Industry" (F. P. C.).....3477

No.	Exhibits.	
176	Pages 253-255, incl. from issue of July-August, 1939, of American Gas Association Monthly, article, "The Fifth Big Job," by Charles R. Bellamy (F. P. C.)	3486
178	Pages 24-33 from January, 1939, issue of "Gas" article, "The Natural Gas Industry Provides Opportunities for Investment," by James S. Carroll (F. P. C.)	3492
179	Statistical Bulletin No. 37 of American Gas Association dated October, 1939, entitled "Annual Statistics of the Natural Gas Industry in 1938" (F. P. C.)	3496
180	Trends of Interest Rates and Bond Yields (I. C. C.)	3523
181	Summaries of Recent Financing by Natural Gas Systems (I. C. C.)	3535
182	Computations in Regard to the Sinking Fund Method of Amortization and Rate of Return on Net Investment (I. C. C.)	3553
183	Money Market Factors (I. C. C.)	3559
184	Exhibit 20, entitled "Details of Items of Expense in Operation of a Single Pipe Line from Texas to Joliet, Illinois and certain misc. data," in Peoples Case before Ill. Comm. Com. No. 21170 (I. C. C.)	3567
185	Rate of Return Study—Part I (F. P. C.)	3576
186	Rate of Return Study—Part II (F. P. C.)	3724
187	Comparative Statement of Combined Profit and Loss for 8 months ended August 31, 1939 and 1938 (I. C. C.)	3784

Vol. I, pp. 1 to 646; Vol. II, pp. 647 to 1310; Vol. III, pp. 1311 to 1976; Vol. IV, pp. 1977 to 2672; Vol. V, pp. 2673 to 3031; Vol. VI, pp. 3033 to 3417; Vol. VII, pp. 3419 to 3902; Vol. VIII, pp. 3903 to 4022.

No.	Exhibits.	
188	Proforma Comparative Balance Sheets Annually at Dec. 31 from 1939 to 1954 and after liquidation (I. C. C.)	3785
191	Revision of Chart 8 and Supporting Schedule No. 12 in Exhibit 185 (F. P. C.)	3841
192	Revision of Chart 10 and Supporting Schedule No. 14 in Exhibit 185 (F. P. C.)	3849
193	Revision of Chart 11 and Supporting Schedule No. 15 in Exhibit 185 (F. P. C.)	3855
195	Revision of Chart No. 12 of Exhibit 185 (Defts.)	3859
196	Revision of Chart No. 14 of Exhibit 185 (Defts.)	3863
197	Study of Yields at Market Prices of Electric Operating Utility Preferred Stock and number of times dividend and prior requirements are earned, Based on Market Prices for week ended Nov. 17, 1939—Income for latest 12 months (F. P. C.)	3867
198	Earnings—Price Ratios of Electric Operating Utility Common Stocks and Per Cent of Gross Income available for common stocks, market prices for week ended Nov. 17, 1939, annual income from latest quarterly reports (F. P. C.)	3869
201	Photostat of Voucher 55810 (6/21/38) $5105.15 to Ralph E. Davis, Inc. (F. P. C.)	3871
202	Data on Sales, Revenue and Customers—Peoples Gas Lt. and Coke Co. (Defts.)	3877
203	Residential Electric Service in United States (Defts.)	3885
204	Commonwealth Edison Co. (Customers, Consumption, Revenue, and Rate) (Defts.)	3885

Vol. I, pp. 1 to 646; Vol. II, pp. 647 to 1310; Vol. III, pp. 1311 to 1976; Vol. IV, pp. 1977 to 2672; Vol. V, pp. 2673 to 3031; Vol. VI, pp. 3032 to 3417; Vol. VII, pp. 3419 to 3902; Vol. VIII, pp. 3903 to 4052.

No. Exhibits.

205 All Mortgage Bonds of Domestic Electric and Gas Utility Companies traded on New York Curb September 15, 1939 (Defts.).....3886
206 All Preferred Stocks of Domestic Electric and Gas Operating Utilities paying full dividends Listed N. Y. Curb (Sept. 15, 1939, Prices) (Defts.).....3888
207 Gross Operating Revenue and Total Net Available for Fixed Charges After Depreciation of the Gas Departments of the Three Utilities Distributing Gas in the Chicago Area (Defts.).....3891
208 Gas, Electric and Telephone Utility Companies serving City of Chicago (Defts.).....3893
209 Bonds, Debentures and Notes of Natural Gas Companies holdings by public (Defts.).....3895
210 Revision of Page One in Exhibit No. 141 (Defts.).....3901
211 Revision of Page One in Exhibit No. 142 (Defts.).....3902

Motion for Interim Order reducing rates, filed November 7, 1939.....3903
Defendants' Pleas to Jurisdiction and Reply to motion for Interim Order filed December 18, 1939.....3914
Conditional Answer to motion for Interim Order, etc., filed Dec. 18, 1939.....3920
Memorandum Opinion, filed July 23, 1940.....3925
Order reducing rates, entered July 23, 1940.....3942
Motion for stay of order of July 23, 1940, filed August 8, 1940.....3947
Objections of Illinois Commerce Commission to motion for stay of order, filed August 9, 1940.....3958

Vol. I, pp. 1 to 646; Vol. II, pp. 647 to 1310; Vol. III, pp. 1311 to 1976; Vol. IV, pp. 1977 to 2672; Vol. V, pp. 2673 to 3361; Vol. VI, pp. 3023 to 3417; Vol. VII, pp. 3419 to 3902; Vol. VIII, pp. 3903 to 4023.

Order granting in part and denying in part motion for stay of order of July 23, 1940, entered August 8, 1940 3960
Application for Rehearing, filed August 16, 1940 3961
Order denying Rehearing, entered September 6, 1940 .. 3993
Certificate to Record 3994

PAPERS FILED IN U. S. COURT OF APPEALS.

Petition for Review, filed September 11, 1940 3997
Statement of Points 4009
Stipulation as to Printing 4020
Supplemental Stipulation as to Printing 4022

I

Order staying order of Commission 4025
Opinion, Evans, J 4026
Judgment 4041
Clerk's certificate 4042
Orders allowing certiorari 4043

Vol. I, pp. 1 to 646; Vol. II, pp. 647 to 1310; Vol. III, pp. 1311 to 1976; Vol. IV, pp. 1977 to 2672; Vol. V, pp. 2673 to 3031; Vol. VI, pp. 3033 to 3417; Vol. VII, pp. 3419 to 3908; Vol. VIII, pp. 3909 to 4062.

2498 **EXHIBIT NO. 168.**

Poor's

Public Utility Volume

1939

Federal Power Commission

Library

Poor's Publishing Company

90 Broad Street, New York, N. Y.

Editorial Office, Wellesley, Mass.

Copyright 1939, by Poor's Publishing Co., New York, N. Y.
Printed in U. S. A.

2499

NATURAL GAS—CUSTOMER CLASSIFICATION

	SALES (Billion cu. ft.) †Domestic	Commercial	‡Industrial	§Total	REVENUE ($Mill.) †Domestic	Commercial	‡Industrial	§Total
	335.418	58.641	585.271	991.036	223.484	32.579	117.857	376.250
	347.979	61.702	569.983	990.066	237.485	33.994	112.171	385.857
	340.591	68.783	489.217	908.270	247.729	37.899	89.276	366.216
	390.641	77.103	427.151	834.010	258.063	39.985	74.194	342.651
	400.296	73.781	479.629	882.389	218.496	37.165	77.148	329.889
	309.321	79.153	582.387	976.141	213.619	39.378	93.122	347.067
	330.723	89.115	632.073	1.053.806	225.415	42.314	106.583	376.388
	329.800	98.756	784.830	1.215.930	237.210	46.483	126.636	412.444
	380.294	103.306	836.169	1.316.199	248.089	48.613	148.294	443.219
	349.985	99.845	736.313	1.260.007	244.539	47.574	125.109	419.474
	+4.1	+70.9	+35.8	+21.1	+9.3	+66.9	+6.1	+11.5

Change 1929-38

† Including House Heating. ‡ Including Elec. Gas. § Including Miscellaneous.

Source: American Gas Association.

vidual company, and depends on the character f the territory and the competitive position of her fuels such as coal, oil and electricity.

NATURAL GAS INDUSTRY

Competitive Position: Favorable

Persistent growth has been the outstanding characteristic of the natural gas industry. The 1929-32 depression proved to be only a temporary check, and new output records have been established in each year since 1934. Even disregarding probable gains in business activity, the outlook would favor continued growth. The reasons are: 1) Vast new sources of supply with long-lived reserves have been developed in the Southwest and in California within the last decade, allaying fears as to the industry's life. 2) Extensive new pipe line transportation systems have been built to carry this gas to the large population centers, notably those of the Middle West and Great Lakes regions. This has opened enormous new markets for future exploitation. 3) Natural gas is clean and has a higher heat value than manufactured gas. Moreover, it can be successfully mixed with manufactured gas. 4) In most localities, natural gas is cheaper so that it can compete successfully with coal and oil as industrial fuel. Even in the heart of coal and oil producing regions, natural gas is being sought on a price basis. Moreover, as rents and prices generally advance with industrial recovery, or inflation, the cost of natural gas should be among the last affected. 5) Large gas utility companies already operating in industrial centers have found it desirable to take over the distribution of natural gas which has generally made it unnecessary to duplicate sales and administration facilities. Furthermore, privately owned utilities have been able to protect themselves against the threat of municipal competition by securing contracts for the delivery of natural gas.

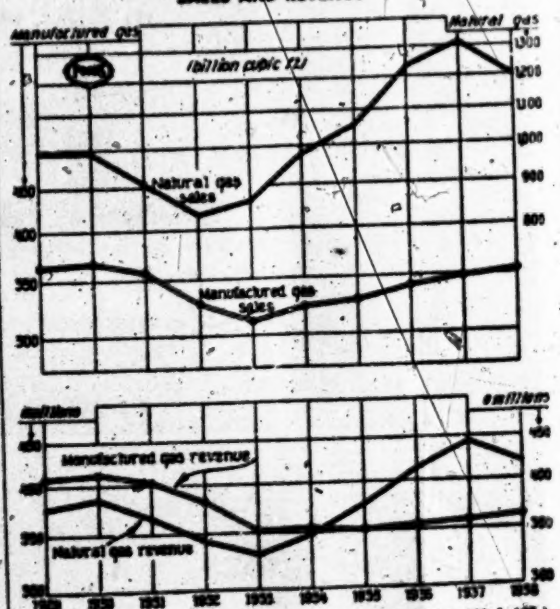
However, implications as to aggregate profit gains are not so clearly defined. As the result of accelerated oil well drilling during the past few years, many natural gas wells have been brought into production by corporations not in the gas business. This product has forced competitive rate reductions in producing areas, particularly as regards industrial rates. More important has been increasing agitation for lower domestic rates, again more noticeable near producing areas. This is an unfavorable development since the domestic demand, carrying the higher rates, is relatively inelastic. Finally, the production of natural gas is basically an extractive industry. Consequently, unit costs tend to rise as individual fields mature.

Although new industrial uses are constantly being developed for natural gas—a recent example is in the manufacture of explosives—earnings still depend largely upon domestic demand. As this represents house heating to a fair degree, sales and earnings vary with temperature conditions.

Increasing Regulation Outlined

Following passage of the Natural Gas Act in June, 1938, closer supervision is outlined for this division of the utility industry. The legislation places natural gas companies engaged in interstate commerce under the jurisdiction of the Federal Power Commission. Only

Chart III—COMPARISON OF NATURAL GAS SALES AND REVENUE WITH MANUFACTURED GAS SALES AND REVENUE



Source of data: American Gas Association. (See Tables 186 & 187.)

Table V
Indexes of Retail Prices of Gas

(1923-25—100)

Average per Quarter	Manufactured Gas (a)	Manufactured Gas (b)	Natural Gas (a)	Natural Gas (b)	Mixed Gas (a)	Mixed Gas (b)	Combined Index (a)	Combined Index (b)
1923	100.1	100.3	97.6	94.9	101.9	101.9	100.0	100.0
1924	100.0	99.9	98.8	100.2	99.2	99.2	99.8	99.8
1925	100.0	99.8	104.1	105.2	98.9	98.9	100.2	100.2
1926	99.6	99.5	107.1	108.1	101.0	101.0	100.2	99.8
1927	99.6	99.1	99.3	108.0	101.0	101.0	100.0	99.4
1928	99.2	98.5	111.8	108.1	101.0	101.0	99.4	98.1
1929	99.6	97.6	119.3	108.4	100.3	100.3	99.5	96.2
1930	100.3	96.9	119.2	108.3	93.3	98.8	99.3	94.2
1931	100.0	95.3	119.2	108.3	93.3	98.8	98.7	92.6
1932	99.6	93.6	119.2	108.3	98.6	98.0	97.8	90.4
1933	99.1	92.1	118.9	108.1	97.9	94.8	97.2	88.8
1934	99.4	92.1	117.8	107.0	98.2	92.8	97.3	88.3
1935	100.1	92.2	114.4	104.1	98.3	92.6	97.5	88.0
1936	99.9	90.2	113.2	101.8	98.1	92.1	96.8	86.1
1937	99.9	85.2	112.5	101.1	98.3	92.4	86.5	83.5
1938	100.6	87.7	112.4	100.8	107.8	96.0	98.6	84.2
1937								
Mar	99.8	89.9	112.8	101.2	98.2	92.2	96.4	85.0
Jun	99.8	85.3	112.7	101.1	98.3	92.3	96.5	82.1
Sep	100.0	85.2	112.7	101.1	98.4	92.5	96.6	82.1
Dec	100.0	89.4	112.7	101.1	98.4	92.4	96.6	84.7
1938								
Mar	100.2	89.5	112.7	101.1	107.8	96.0	98.4	85.4
Jun	100.7	85.8	112.3	100.6	107.8	96.0	98.7	83.0
Sep	100.7	85.8	112.3	100.7	107.8	96.0	98.7	83.0
Dec	100.7	90.0	112.3	100.7	107.6	95.8	98.6	85.6

(a) Based on consumption of 10.6 therms. (b) Based on consumption of 30.6 therms. (See Note).

Note: In order to put the prices upon a comparable basis it was necessary to convert the normal consumption requirements used for computing monthly bills into an equivalent heating value expressed in therms. Average residential requirements per month for each of four combinations of service are as follows—Range, 10.6; range and manual type water heater, 19.6; range and automatic storage or instantaneous type water heater, 30.6; range, automatic storage or instantaneous type water heater and refrigerator, 40.6. Indexes for the 2 services (10.6 and 30.6 therms) are based on data from the following number of cities: Manufactured Gas, 40 cities in Mar., 1923, decreasing to 25 cities by June, 1936; Natural Gas, Mar., 1923, 7 cities, increasing to 18 cities by June, 1936; Mixed Gas, Mar., 1923, 3 cities, June, 1936, 7 cities. The Combined Index is based on 50 cities throughout.

Source: U. S. Bureau of Labor Statistics.

Table VI
Manufactured Gas—Sales and Revenue

(Per Cent of Each Class of Service to Total)

	Domestic		House Heating		*All Other	
	Sales	Revenue	Sales	Revenue	Sales	Revenue
1929	70.1	76.8	3.7	2.8	26.2	20.4
1930	70.0	76.5	4.8	3.5	25.2	20.0
1931	70.6	77.0	5.3	3.8	24.1	19.2
1932	73.0	79.1	5.8	3.8	21.2	17.1
1933	71.4	78.7	6.4	4.0	22.2	17.3
1934	66.8	76.9	8.7	5.3	24.5	17.8
1935	62.6	75.1	10.6	6.4	26.8	18.5
1936	58.0	72.5	12.1	7.3	29.9	20.2
1937	55.7	71.4	13.1	7.9	31.2	20.7
1938	55.8	71.6	13.5	8.5	30.7	19.9

*Includes Industrial and Commercial.

Source: Computed by Poor's from data reported by the American Gas Association.

Table VII
Consumption of Fuel For Production of Electrical Energy

	Fuel Used				Energy	
	Coal (Thous. Short Tons)	Oil (Thous. †Bbls.)	Gas (Million Cu. Feet)	*Total (Thous. Short Tons)	Generated By Fuels (Mill. K.W.H.)	Fuel Used Per KWH Generated (lbs.)
1920	42,938	10,466	21,861	46,154	27,228	3.39
1921	31,575	12,046	23,716	34,916	25,864	2.70
1922	34,171	13,224	27,181	37,770	30,216	2.50
1923	38,966	14,681	31,486	43,306	36,088	2.40
1924	37,563	16,643	48,465	42,687	38,806	2.20
1925	40,217	10,264	46,526	45,431	43,268	2.10
1926	41,329	9,430	53,694	46,107	47,289	1.95
1927	41,887	6,784	62,922	46,001	50,001	1.84
1928	41,390	7,154	77,426	46,471	52,808	1.76
1929	44,394	10,185	112,621	52,639	62,295	1.69
1930	42,910	9,263	120,297	50,636	62,513	1.62
1931	38,714	8,129	139,274	47,113	60,791	1.55
1932	30,296	7,967	107,840	36,698	48,931	1.50
1933	30,575	9,953	102,726	37,151	50,546	1.47
1934	33,561	10,391	127,892	41,832	56,914	1.47
1935	34,164	11,378	125,239	43,198	59,176	1.46
1936	42,025	14,119	156,080	51,987	72,188	1.44
1937	44,766	14,143	171,268	55,142	76,883	1.43
1938	40,212	13,077	170,688	50,574	71,525	1.41

*Putting all fuel on "coal equivalent" basis (output by use of wood not included). †Of 42 gals.

Source: U. S. Geological Survey and Federal Power Commission.

Table VIII
Domestic Gas Service

	†Number of Customers (thous.)	Average Annual Use (MCF)	Average Annual Bill	*Average Rate Per MCF
Manufactured & ‡Mixed Gas (excl. house heating)				
1929	9,217	27.6	$34.08	$1.234
1930	9,232	27.8	34.18	1.229
1931	9,138	27.6	33.92	1.231
1932	8,730	27.4	34.58	1.262
1933	8,664	25.6	32.00	1.249
1934	8,792	24.5	31.02	1.266
1935	8,910	23.1	29.60	1.282
1936	8,924	22.2	28.84	1.299
1937	9,220	21.1	27.67	1.312
1938	9,254	21.3	28.01	1.314
Manufactured & Mixed Gas (house heating)				
1929	42	324.1	$274.68	$0.848
1930	52	338.4	279.88	0.827
1931	57	335.7	270.09	0.804
1932	59	321.8	247.66	0.770
1933	79	253.6	178.57	0.704
1934	115	245.0	163.72	0.668
1935	131	267.4	172.66	0.646
1936	171	240.1	152.53	0.635
1937	202	225.9	141.30	0.625
1938	227	211.4	136.88	0.647
Natural Gas (incl. house heating)				
1929	5,540	60.5	$40.34	$0.667
1930	5,840	59.6	40.66	0.683
1931	5,777	59.0	41.15	0.698
1932	5,671	56.5	40.20	0.711
1933	5,716	52.5	37.37	0.711
1934	5,911	51.3	36.12	0.719
1935	6,104	52.5	36.95	0.704
1936	6,292	54.0	37.71	0.698
1937	6,512	55.3	38.09	0.699
1938	6,655	52.5	36.72	0.699

†At end of year. ‡Mixed gas is a mixture of manufactured and natural gas.

*Computed from Average Annual Use and Average Annual Bill and does not show the actual trend of rates. For a correct picture of the changes in retail prices, see Table V.

Source: Computed by Poor's from data reported by the American Gas Association.

Table IX
Natural Gas—Sales and Revenue
(Percentage of Each Class of Service to Total)

	†Domestic		Commercial		‡Industrial	
	Sales	Rev.	Sales	Rev.	Sales	Rev.
1929.....	33.9	59.4	5.9	8.7	59.1	31.3
1930.....	35.2	61.6	6.2	8.8	57.5	29.1
1931.....	37.5	64.9	7.6	11.0	53.9	24.4
1932.....	38.4	66.6	9.2	11.4	51.2	21.6
1933.....	34.8	64.7	8.5	11.3	55.6	23.4
1934.....	30.7	61.5	8.0	11.1	58.9	26.8
1935.....	30.4	59.9	8.4	11.2	60.0	28.3
1936.....	27.9	57.5	8.0	11.3	62.9	30.7
1937.....	27.4	56.0	7.9	11.0	63.5	33.5
1938.....	29.1	58.3	8.3	11.3	61.4	29.7

†Including House Heating. ‡Including Elec. Gen.

Source: Computed by Poor's from data reported by the American Gas Association.

2502 EXHIBIT NO. 169.

Moody's Manual
of Investments
American and Foreign

Public Utility Securities
John Sherman Porter, Editor-in-Chief

Editorial Board

Nelson Schaenen — Max F. Brupbacher
Walter E. Hahn — Joseph M. Oliver
L. A. Griffin — Joseph A. Dittrich
Frank J. St. Clair

1939

Copyright, 1939, by
Moody's Investors Service, New York
All Rights Reserved

Moody's Investors Service
65 Broadway, New York

Philadelphia — Stock Exchange Bldg.
Boston — 75 Federal St.
Chicago — 105 W. Adams St.
Los Angeles — Hollingsworth Bldg.
Pittsburgh — Union Trust Bldg.
San Francisco — Russ Bldg.

London: Moody's Investors Service, Ltd.
King William Street House, Arthur Street, E.C.4

Liabilities:	1936	1935	1934	1933	1932	1931	1930	1929
Capital stock	$841,740	$843,959	$855,271	$849,345	$849,328	$842,313	$827,361	$797,412
Long term debt	793,600	786,886	789,926	793,631	800,582	768,414	678,063	612,178
Current liabilities	53,670	57,457	56,663	79,987	100,044	112,123	134,191	172,379
Accrued liabilities	99,684	97,149	98,460	95,014	89,598	94,224	109,985	94,408
Retirement reserve	201,686	202,376	197,424	185,173	174,090	159,455	137,079	142,852
Other reserves	55,628	54,459	55,612	54,568	62,208	65,136	68,426	68,910
Miscellaneous unadjusted credits	6,900	3,000	2,939	5,848	4,410	4,097	2,444	4,214
Surplus	231,413	227,297	229,964	246,516	240,941	290,732	268,049	215,369
Total liabilities	$2,306,221	$2,307,561	$2,317,179	$2,311,772	$2,321,201	$2,316,593	$2,221,700	$2,107,325

* Companies formerly distributing manufactured gas but which were distributing natural gas at the beginning of 1937 have been excluded from the above tabulation for all eight years. The data shown above for 1929 to 1936 are therefore not comparable with data for the manufactured gas industry previously issued for these years.

II. THE NATURAL GAS INDUSTRY

While the natural gas industry had its beginning over a century ago, its importance and development came much later than the manufactured gas industry, and in fact the growth since 1921 has been far greater than in any other period. In these recent years investment attention has been drawn to the industry as a branch of the public utility field of increasing importance, and this interest was especially apparent from 1929 to 1931, during which period there was much new construction and extension of long distance natural gas pipe lines throughout the country.

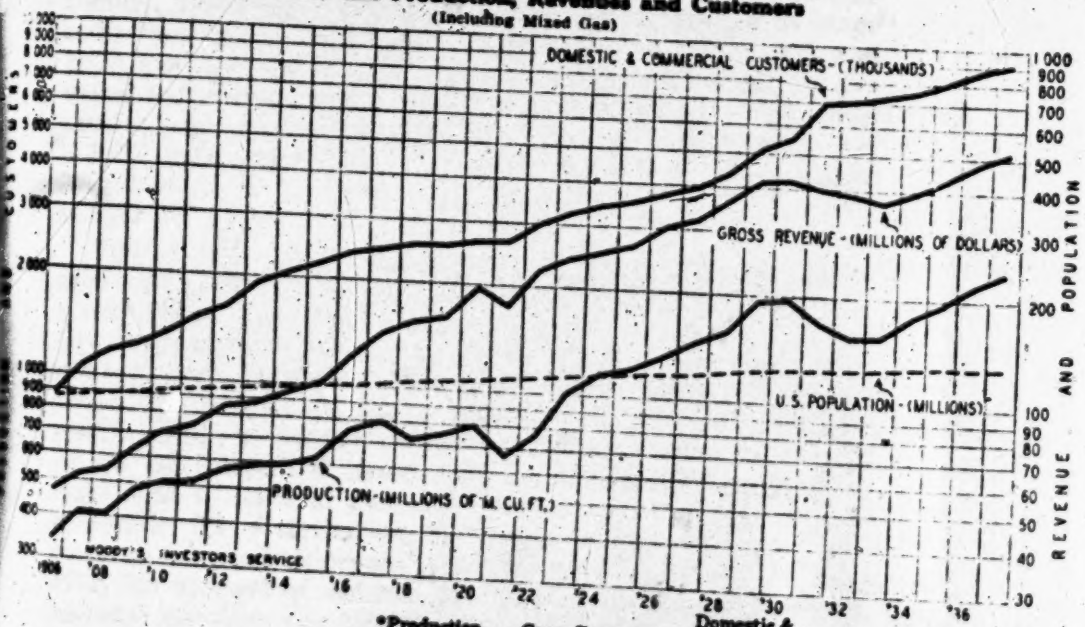
Growth of the Industry

Natural gas was first used and developed extensively in what are known as the Appalachian fields, located in western New York and Pennsylvania, eastern Ohio, West Virginia and northern Kentucky. With the rapid development in the oil industry, gas fields were discovered in connection with oil drilling. At first this gas was considered a by-product of relatively small value but its importance has since been well recognized and wastage of gas is being curtailed by state legislation. The new fields to develop in connection with the oil industry were the Monroe and Richland fields in Louisiana, the Amarillo field in Texas, the Hugoton field in Kansas, the Oklahoma fields and the Kettleman Hills, Button Willow and Ventura fields in California. With the discovery of immense resources of natural gas, the fear that exhaustion of supply would prohibit the extensive development of the industry has passed and today it is estimated by geologists that the country's supply is sufficient for many years to come.

In following the growth of the industry, statistical information is not as complete as in the case of manufactured gas. However, the following figures representing a compilation of reports of the U. S. Bureau of Mines, reflect the annual growth since 1906.

Natural Gas Production, Revenues and Customers

(Including Mixed Gas)



	*Production (M cu. ft.)	Gross Revenues in Dollars	Domestic & Commercial Customers	Gasoline Recovery—in Gal.
1937	2,447,620,000	$528,686,000	9,028,000	2,039,100,000
1936	2,167,802,000	476,916,000	8,674,000	1,796,340
1935	1,916,595,000	429,317,000	8,004,000	1,651,986,000
1934	1,770,721,000	395,290,594	7,566,000	1,535,360,000
1933	1,555,474,000	368,119,000	7,232,000	1,420,000,000
1932	1,585,980,000	384,123,000	7,037,000	1,523,800,000
1931	1,686,436,000	392,156,000	6,961,000	1,831,918,000
1930	1,943,421,000	415,519,000	5,448,000	2,210,494,000
1929	1,917,893,000	413,153,000	5,098,000	2,233,688,000
1928	1,548,189,000	363,726,000	4,344,000	1,814,034,000
1927	1,445,428,000	317,930,000	3,984,000	1,641,144,000
1926	1,312,853,000	300,168,000	3,731,000	1,363,090,000
1925	1,188,439,000	285,271,000	3,508,000	1,127,470,000
1924	1,141,482,000	263,830,000	3,443,000	933,861,000
1923	1,008,135,000	239,966,000	3,234,000	816,226,000
1922	762,546,000	221,535,000	3,014,600	505,832,000
1921	662,062,000	174,617,000	2,651,904	449,934,000

2504
a56

A Nation-Wide Survey of Public Utility Progress

	*Production (M cu. ft.)	Gross Revenues in Dollars	Domestic & Commercial Customers	Gasoline Recovery—in Gal.
1920	798,210,000	196,194,000	2,635,968	384,744,000
1919	745,916,000	160,888,000	2,525,849	351,535,000
1918	721,001,000	153,553,560	2,525,124	282,535,000
1917	795,110,000	142,089,334	2,449,895	217,884,000
1916	753,170,000	120,227,468	2,380,772	103,493,000
1915	628,578,842	101,312,381	2,213,439	65,365,000
1914	591,866,733	94,115,524	2,090,985	42,653,000
1913	581,898,239	87,846,677	1,934,071	24,061,000
1912	562,203,452	84,563,957	1,637,493	12,081,000
1911	512,993,021	74,621,534	1,512,224	7,427,000
1910	509,155,309	70,756,158	1,345,989	†
1909	480,706,174	63,206,941	1,240,697	†
1908	402,140,730	54,640,374	1,177,973	†
1907	404,441,254	52,222,399	1,068,186	†
1906	338,842,562	46,873,932	884,018	†

*Includes only gas marketed, does not cover gas blown into the air or otherwise unaccounted for. †Figures not available.

Production has expanded faster than the number of customers, reflecting the gradual extension of supply to large industrial users. The gain in customers in 1931, 1932 and 1933 was due chiefly to a gain in the number of consumers using natural gas mixed with manufactured gas. The companies reporting to the American Gas Association showed a 10% drop in gas sales and a 5% drop in revenues in 1938 in reflection of economic recession and generally warmer winter weather.

The amount of gasoline recovered through treating natural gas expanded prior to the depression, as a result of more efficient technique and the increase in gas produced for consumption in the oil fields. It is interesting, however, to note that in contrast to production from "dry gas" wells, the amount of gas available from oil wells depends on the crude oil requirements of oil companies. The value of the oil output of these wells is, of course, far greater than that of natural gas and consequently the gas supply available for distribution fluctuates widely due to variations in oil production and the drilling of new wells. Since 1929 the amount of natural gas treated for the recovery of natural gasoline has several times exceeded the total marketed production due to the fact that natural gas was allowed to escape into the air for want of a market after being treated.

*Trend of Natural Gas Production by States.

(Millions of cubic feet)

	Arkansas	California	Illinois	Indiana	Kansas	Kentucky	Louisiana	Montana	New York	Ohio
1906	†	153	410	7,861	69,323	789	‡1,039	.....	2,548	45,486
1907	†	230	1,155	6,624	76,707	1,303	‡1,288	.....	3,288	52,041
1908	†	479	4,979	5,256	80,740	1,430	‡1,752	.....	3,843	47,442
1909	†	2,324	8,473	6,159	75,074	2,097	‡4,365	.....	4,696	58,223
1910	†	2,764	6,723	5,760	59,380	1,357	‡8,110	.....	6,010	48,232
1911	†	6,390	6,762	4,365	38,800	1,275	§9,786	.....	5,240	49,450
1912	†	9,355	5,603	3,618	28,068	1,951	§14,493	.....	8,626	56,210
1913	†	11,035	4,767	2,921	22,884	1,821	§26.653	.....	8,515	50,612
1914	†	17,829	3,548	2,580	22,628	1,422	§26,775	.....	8,935	68,270
1915	1992	21,891	2,690	2,261	27,046	1,667	25,540	6	7,977	79,510
1916	2,388	31,643	3,534	1,715	31,710	2,107	32,081	213	8,036	69,888
1917	5,610	49,427	4,439	1,712	24,439	2,802	31,287	334	8,372	68,917
1918	5,295	39,719	4,473	1,667	27,825	3,022	36,094	177	8,461	61,261
1919	5,587	55,607	3,825	1,407	16,150	2,057	47,062	858	8,124	63,153
1920	9,027	66,041	3,013	1,779	21,158	3,345	58,274	818	8,419	58,938
1921	4,260	75,942	2,646	1,066	15,717	4,820	58,004	336	6,583	47,412
1922	9,700	84,580	3,383	947	20,289	5,872	70,267	486	6,947	51,481
1923	24,215	131,434	4,049	880	30,913	11,953	112,031	1,470	6,497	53,812
1924	36,616	189,692	4,072	998	25,580	12,875	160,945	1,071	6,196	47,396
1925	41,878	187,789	4,165	1,168	26,917	10,770	152,620	1,496	6,210	43,285
1926	43,566	204,915	3,808	901	38,095	10,410	157,423	2,283	7,027	47,863
1927	30,450	212,364	3,741	1,124	42,646	10,206	186,961	4,253	5,908	51,381
1928	20,235	246,215	3,051	1,290	45,644	15,383	227,821	6,277	7,224	56,341
1929	19,928	342,214	2,983	1,012	38,469	27,588	261,138	9,659	8,387	57,936
1930	18,585	334,789	2,890	1,217	37,630	28,023	278,341	10,060	9,624	63,394
1931	13,300	305,930	2,130	1,337	38,742	27,870	224,155	10,949	7,868	56,326
1932	10,235	263,484	1,769	1,349	40,690	29,005	201,561	13,295	8,813	51,466
1933	8,288	259,799	1,631	1,544	41,596	31,380	197,826	14,391	6,865	47,929
1934	7,024	268,122	1,868	1,802	46,909	33,124	225,713	14,971	6,278	50,330
1935	6,167	284,109	1,448	1,777	57,125	39,738	249,450	19,870	8,288	49,592
1936	8,500	320,406	865	2,241	69,178	43,903	290,151	23,003	12,431	46,994
1937	9,690	329,769	1,040	1,551	83,890	55,719	315,301	24,765	21,325	42,783

	Oklahoma	Pennsylvania	Texas	West Virginia	Wyoming	Others	Total	Value at Points of Consumption Total (Thousands of Dollars)	Value at Points of Consumption Aver. per M cu. ft. (cents)
1906	3,520	138,161	‡	119,400	†	203	388,843	46,874	12.1
1907	4,867	135,516	‡	122,687	†	916	406,622	54,222	13.3
1908	11,925	130,476	‡	112,181	†	1,638	402,141	54,640	13.6
1909	28,037	127,697	‡	166,435	†	2,126	480,706	63,207	13.1
1910	50,430	126,867	‡	190,706	†	2,816	509,155	70,756	13.9
1911	67,276	108,869	5,503	206,891	†	2,386	512,993	74,622	14.5
1912	73,799	112,150	7,470	239,007	†	1,853	562,203	84,564	15.0
1913	75,018	118,860	12,160	245,454	†	1,198	581,898	87,847	15.1
1914	78,167	110,745	13,434	236,489	†	1,045	591,867	94,116	15.9
1915	87,517	113,692	13,324	244,004	†	462	628,579	101,312	16.1
1916	123,517	130,484	15,810	299,319	†	725	753,170	120,227	16.0
1917	137,384	133,397	17,047	308,617	†	1,326	795,110	142,089	17.9
1918	124,317	123,813	13,440	265,161	4,339	1,937	721,001	153,554	21.3
1919	163,649	113,489	24,710	234,095	6,014	129	745,916	160,888	21.6
1920	154,467	125,787	37,063	239,719	10,312	50	798,210	196,194	24.6
1921	124,058	86,144	44,504	174,921	15,608	31	662,052	174,617	26.4
1922	140,631	101,276	47,945	195,288	23,427	27	762,546	221,535	29.1
1923	203,082	112,562	74,535	203,867	35,523	153	1,006,976	240,001	23.8
1924	214,452	105,863	107,247	182,285	46,036	197	1,141,521	253,856	22.2
1925	249,285	101,632	134,872	180,345	45,539	650	1,188,571	265,271	22.3
1926	286,421	107,089	175,392	180,223	46,567	1,536	1,313,019	300,168	22.9
1927	326,864	105,709	254,063	162,375	43,582	3,801	1,445,428	317,930	22.0
1928	320,861	99,466	301,990	163,018	47,490	5,833	1,568,139	363,726	23.2
1929	357,893	101,951	464,928	167,333	44,648	11,626	1,917,693	413,276	21.6
1930	348,116	88,706	517,880	144,180	43,219	16,767	1,943,421	416,090	21.4
1931	263,685	74,797	464,580	124,797	39,770	30,200	1,686,436	392,816	23.3
1932	255,497	61,611	456,832	100,540	28,938	30,915	1,555,990	384,632	24.7
1933	245,759	63,579	475,691	100,653	25,830	32,713	1,555,474	368,540	23.7
1934	254,457	86,283	602,976	109,161	23,148	**38,555	1,770,721	394,871	22.3
1935	274,313	94,464	642,366	115,772	26,643	**45,473	1,916,595	429,317	22.4
1936	280,481	110,362	734,561	138,076	29,322	**34,161	2,167,802	476,916	22.0
1937	336,260	115,928	854,561	149,084	31,023	**74,931	2,447,620	528,686	21.6

* Includes only gas consumed.
† Included under "Others."
‡ Alabama and Texas included with Louisiana.
§ Includes Alabama.
¶ Includes gas piped from Oklahoma and consumed in Arkansas.
** Includes New Mexico: 1937, 46,337; 1936, 33,928; 1935, 27,931; 1934, 24,075.

2505 The above table shows the growth of the various gas fields over the past 30 years. The tremendous change that has taken place in the output of the various states is shown by the fact that in 1906 Pennsylvania and West Virginia accounted for approximately 65% of the total United States production, whereas in 1937 they accounted for only 11% of the total. The States of California, Lousiana, Oklahoma and Texas, which together produced only a little over 1% of the total in 1906, now account for approximately 75% of all gas produced in the United States. By 1920 the southeastern fields and the California fields had already assumed considerable importance, accounting for approximately 40% of the total production in that year. The greatest increase in any state has been in Texas, which in 1920 produced only 37,000,000 cubic feet and in 1937 over 850,000,000. A substantial part of the increase in these fields is due the opening up of new wells, but part is also due to the utilization of gas which was previously blown off in the air and wasted. Some idea of the extent of this waste can be gained from the fact that from 1920 to 1932 it has been estimated that approximately 35% of the total natural gas production in California was wasted. In the last few years, however, regulation has reduced wastage.

Classification of Natural Gas Sales
(Millions of cubic feet)

	Domestic	Commercial	Petroleum Refineries	Electric Public Utility Power Plants	Miscellaneous Industrial	Total Misc. Industrial, Petroleum Refineries, and Electric P. U. Power Plants	Field Use	Carbon Black Manufacture	Total Industrial
1937		489,234	113,005	170,567	637,830	921,402	691,320	341,085	1,953,807
1936		454,969	93,183	156,080	554,397	803,660	618,468	283,421	1,705,549
1935		413,685	80,175	125,239	468,799	674,213	580,414	241,589	1,496,216
1934		379,497	79,965	127,896	393,155	601,016	554,542	229,933	1,385,491
1933	283,197	85,577	66,333	102,601	334,451	503,385	494,459	186,781	1,184,625
1932	298,520	87,367	67,467	107,239	296,127	470,833	529,378	168,237	1,168,448
1931	294,406	86,491	75,548	138,343	322,700	536,591	571,365	195,396	1,303,352
1930	295,700	80,707	98,842	120,290	356,315	575,447	723,165	266,625	1,565,237
1929		359,853	103,729	112,707	374,972	591,408	705,083	261,107	1,557,598
1928		320,877	114,950	77,326	305,991	498,267	573,698	175,137	1,247,102
1927		296,036	123,395	62,919	269,352	455,686	549,455	144,087	1,149,206
1926		289,175	121,449	53,207	240,513	415,169	478,188	130,321	1,023,678
1925		272,146	87,843	46,521	218,040	352,404	423,524	140,366	916,293
1924		285,482	†	48,443	*285,000	306,443	393,437	156,514	856,330
1923		276,967	†	31,009	*247,000	278,000	343,076	109,096	729,917
1922		254,413	†	27,000	*229,000	256,000	198,000	54,000	508,133
1921		248,334	†	24,000	*157,000	181,000	182,000	51,000	413,718
1920		286,001	†	25,000	*244,000	269,000	202,000	41,000	512,209
1919		255,743	†	21,000	*249,000	270,000	170,000	50,000	490,173

†Included in miscellaneous industrial. *Includes petroleum refineries.

Exhibit No. 169.

3435

The foregoing table shows the trend of total consumption and the consumption by groups over the past eighteen years. From 1920 to 1929 the proportion of gas taken by industrial consumers was constantly increasing, rising from 62.5% of the total in 1921 to 81.0% in 1929. With the decline in business activity, industrial consumption was curtailed, while domestic consumption, because of the extension of pipe lines to large centers of population in 1929, 1930 and 1931, continued to increase. The combination of these two factors caused a drop in the percentage of gas taken by the industrial consumer from 81.0% in 1929 to 75.6% in 1934 but with the revival of general business activity this percentage rose to 80% in 1937 and it is expected that the long-term trend of an increasing proportion of the product being absorbed by industrial consumers will continue.

Sources of Natural Gas Revenues*

	Domestic	Commercial	Domestic & Commercial	**Miscellaneous Industrial	Field Use	Carbon Black	Total Industrial	Total
1937		$330,722	$330,722	$161,298	$32,363	$4,294	$197,955	$528,677
1936		305,284	305,284	138,051	28,397	3,681	170,129	475,413
1935		283,417	283,417	113,736	27,225	3,787	144,748	428,165
1934		260,335	260,335	101,569	28,356	4,016	133,941	394,276
1933	$209,665	$42,576	252,241	83,166	28,851	3,821	115,838	368,079
1932	223,377	44,000	267,377	81,268	32,585	2,893	116,746	384,123
1931	208,262	41,347	249,488	98,030	40,469	4,048	142,547	392,816
1930	200,615	38,558	239,173	111,226	59,118	6,002	176,346	415,519
1929	.....	.....	223,172	116,521	68,352	5,108	189,981	413,276
1928	.....	.....	198,808	102,146	58,356	4,321	164,823	363,726
1927	.....	.....	180,018	94,809	38,912	4,064	137,785	317,930
1926	.....	.....	168,810	.....	36,650	.....	131,185	300,168
1925	.....	.....	152,494	.....	.....	.....	112,690	265,271
1924	.....	.....	154,075	.....	.....	.....	99,755	253,830
1923	.....	.....	142,317	.....	.....	.....	97,678	239,966

* 000's omitted. ** Includes electric public utility power plants and petroleum refineries.

The preceding table shows the amount of revenues contributed by each class of consumer. From 1923 to 1929 the proportion of revenues contributed by industrial users showed a steady gain, rising from 40.7% in 1923 to 46.0% in 1929. From 1929 to 1932, inclusive, the decline in industrial revenues was more drastic than the decline in sales, and in 1932 revenues from this source amounted to only 30.4% of the total. As in the case of industrial sales, a pick-up in the proportion of revenues contributed by industrial consumers to 37.5% of the total occurred in 1936. Revenues from gas used in the field amounted to 6.0% of the total, and that used in the carbon black industry to 0.8%. It is apparent that while these two industries are important from the viewpoint of the consumption of gas taking nearly 42% of the total, they contribute an insignificant amount, 6.8% of total revenues.

Revenues per Thousand Cubic Feet, in Cents

	Domestic	Commercial	Domestic & Commercial	**Miscel. Industrial	Field Use	Carbon Black	Total Industrial	Total for All Sources
1937	....	....	67.6	17.5	4.7	1.3	10.1	21.6
1936	....	....	67.1	17.2	4.6	1.3	10.0	22.0
1935	....	....	68.5	16.8	4.7	1.6	9.7	22.4
1934	....	....	68.6	16.8	5.1	1.7	9.7	22.3
1933	74.0	49.8	68.4	16.5	5.9	2.0	9.8	23.7
1932	74.8	50.4	69.3	17.3	6.2	1.7	10.0	24.7
1931	70.7	47.8	65.5	18.3	7.1	2.3	10.9	23.3
1930	67.8	47.8	63.5	19.3	8.2	2.0	11.3	21.4
1929	....	....	62.0	19.7	9.7	1.9	12.2	21.5
1928	....	....	62.0	20.3	10.2	2.5	13.2	23.2
1927	....	....	60.8	20.4	7.1	2.8	12.0	22.0
1926	....	....	58.4	....	7.7	....	12.8	22.9
1925	....	....	56.0	....	....	....	12.3	22.3
1924	....	....	54.0	....	....	....	11.6	22.2
1923	....	....	51.4	....	....	....	13.4	23.8

* Includes electric public utility power plants and petroleum refineries.

This table, derived from the two previous ones, shows the price paid per unit for gas used by the various consuming groups. It brings out the tremendous difference in the price paid for gas by the different consumers. In fact, the price paid for gas to manufacture carbon black and for field use is so low that sales in these categories should be eliminated in measuring the progress of the industry. The price per unit of gas sold to domestic and commercial consumers has in recent years tended to rise because a growing proportion is sold at points more distant from production centers than formerly. Revenues per unit of gas sold to miscellaneous industrial consumers, on the other hand, has been generally downward since 1927 because of the larger proportion of gas sold in the lower priced part of the group. The price per unit of gas sold for field use has also been declining. In this group the price per unit is dependent on many factors, such as the price of fuel gas, available supply of natural gas, and the demand for fuel for drilling and pumping purposes. The price per unit of gas sold to the carbon black manufacturer has been irregular, varying with the demand for carbon black and the available supply of gas for which there is no demand by the other consuming industries. The average price of gas sold for all sources was downward until 1930 because of the increasing proportion of the product taken by the groups paying low prices and also the decrease in the price paid by those consumers. Since 1932 it has again declined.

2506 Domestic Consumption

The trend of domestic and commercial consumption combined has been steadily upward for the past decade, increasing 51% from 1919 to 1932, declining 4.5% in 1933, increasing 2.9% in 1934, 9.1% in 1935, 9.0% in 1936 and 7.5% in 1937. The gain in sales and revenues continued through most of the depression as a result of the extension of pipe lines to densely populated areas which were previously served only by manufactured gas. The most notable examples were the Detroit line which connects the city of Detroit with the Texas, Panhandle and the Hugoton, Kanses fields and the Chicago line, which pipes gas from the "Panhandle" in Texas to the city of Chicago. In the latter case the gas is then mixed with the manufactured product and distributed throughout the entire city. While

we have no figures indicating the experience of domestic sales, exclusive of business gained because of the extension of pipe lines, figures from individual companies and individual states indicate declines in both sales and revenues were experienced during the depression. Per capita consumption by domestic and commercial users has dropped quite steadily as the number supplied with mixed gas has increased.

Mainly as a result of an increase in the proportion of gas consumed in areas at some distance from the points of production, the price per unit of gas sold to domestic and commercial consumers has risen over the long term. Obviously, the cost per unit of gas in Chicago is greater than at the point of production in Texas. Since we expect a continuation of the growth of long distance pipe lines and of consumption at points far removed from the production centers, we look for a continued rise in the average price per thousand feet of gas sold for domestic and commercial purposes, which, however, is more than offset by the increase in heating value resulting. The average price per 1,000 cubic feet paid by domestic and commercial consumers varies widely, depending largely on the distance from the producing field. For example, in 1937 average domestic and commercial prices (combined), ranged from about $1.18 per 1,000 cubic feet in Illinois and Michigan to 36 cents in West Virginia. (See "Summary of Natural Gas Statistics" below.)

Miscellaneous Industrial Consumption

Consumption in this category increased more rapidly than domestic consumption from 1925 to 1929, but fell off sharply in 1931 and 1932, increasing the five following years to far above the previous peak. The principal consumers in this group are the steel, glass, brick and cement industries. In the first three named, the product, because of its cleanliness and the ease with which the temperature may be controlled, has a special value. In the cement industry, however, the only question that arises as to the desirability of the fuel is the cost per heat unit.

Petroleum Refineries: Consumption of natural gas at petroleum refineries declined steadily until 1934, as many refiners found it cheaper to utilize fuels made at their plant (fuel oil, refinery gas, and coke) than to buy natural

gas from outside companies. Since 1934, however, this trend changed as the price of fuel rose.

Electric Public Utility Power Plants: The quantity of natural gas used in electric public utility power plants increased rapidly through 1931, more so than in any other industry. This has followed from the extension of lines making available a fuel often cheaper than coal or oil and, while the trend was interrupted in 1932 and 1933, it was resumed in 1934 with the revival of electric consumption, sales reaching a new high in 1937.

Field Uses: This category includes gas used for drilling, pumping, and other field purposes, in connection with the production of oil and gas. The use of gas for this purpose has constituted the largest item in consumption since natural gas statistics were first compiled. This widespread use of gas in the field is chiefly the result of its accessibility. The consumption of gas for this purpose has increased approximately 300% since 1919. The increase is a reflection of the discovery of new gas fields. However, the decline since 1929 is a result, not only of the decline in general business activity, but even to a greater extent of the fact that the east Texas oil fields, which now produce a large portion of the total oil, have an abnormally low gas-oil ratio. Had the east Texas fields been normal as regards gas production, many wells drilled with fuel oil would have been drilled with gas and the national total for field purposes would have shown a much smaller decline.

Carbon Black: The use of natural gas as the raw material for the manufacture of carbon black, which had increased rapidly up to 1930, slumped sharply in the two subsequent years. This substantial decrease resulted primarily from voluntary restrictions placed on production by the carbon black producers. As can be seen from the above table, the price paid for gas for this purpose is extremely low, and represents the utilization of gas which otherwise might have gone to waste. The carbon black industry moves toward the center of greatest production, where the fuel is cheapest, and about 20% of the total carbon black is produced in Louisiana and nearly all the rest in Texas, as a result of the expansion of the natural gas industry in those states. As conditions in the carbon black industry have shown improvement since 1933, consumption rose to a new high in 1937.

Natural Gas Sales—Monthly
(Millions of Cubic Feet)

	Domestic Sales (Including House Heating)						Total Sales					
	1939	1938	1937	1936	1935	1934	1939	1938	1937	1936	1935	1934
January	49,177	46,503	46,697	45,201	40,679	38,562	129,397	122,093	128,263	121,957	105,611	95,154
February	51,291	45,497	47,758	51,899	40,136	38,381	134,515	120,462	134,025	134,140	104,549	97,689
March	46,791	40,988	41,900	40,427	35,658	38,078	127,377	113,637	126,633	112,235	97,005	96,714
April	36,509	34,323	39,216	32,973	29,838	30,336	113,379	105,608	124,723	104,605	89,036	86,185
May	.....	25,693	26,249	24,524	25,712	22,139	.....	91,720	104,242	91,191	82,343	74,778
June	.....	19,648	18,694	17,448	19,988	16,756	.....	82,497	94,494	83,684	73,630	68,831
July	.....	16,270	15,589	14,220	14,711	13,308	.....	79,488	91,777	81,469	67,893	63,859
August	.....	14,510	14,549	13,155	13,080	12,461	.....	80,697	94,201	84,053	71,080	64,736
September	.....	15,671	15,686	13,876	14,775	14,366	.....	85,624	94,959	87,130	74,905	68,051
October	.....	19,683	21,145	18,960	19,380	17,754	.....	94,403	102,651	94,267	84,574	73,803
November	.....	29,457	30,780	30,157	27,919	24,982	.....	109,128	110,724	111,496	99,130	85,892
December	.....	43,333	45,802	40,633	37,929	35,326	.....	128,012	129,341	124,418	112,730	99,249
Total	.....	351,576	364,064	343,473	319,806	302,449	.....	1,213,369	1,336,034	1,230,645	1,062,486	974,941

Revenue from Sales of Natural Gas
(Thousands of Dollars)

	Domestic Revenues (Including House Heating)						Total Revenues					
	1939	1938	1937	1936	1935	1934	1939	1938	1937	1936	1935	1934
January	32,140	30,656	30,091	29,717	26,922	25,871	50,279	47,670	47,846	46,182	41,050	38,196
February	32,619	29,687	30,532	32,490	25,982	24,980	51,197	46,470	48,995	50,144	40,114	37,712
March	30,218	27,027	27,161	26,257	23,675	24,598	47,978	42,832	45,234	41,395	37,043	37,332
April	24,845	23,243	25,300	22,347	20,472	20,396	41,034	38,006	42,667	36,979	33,072	31,945
May	.....	18,577	18,706	17,465	18,097	16,003	.....	31,874	34,159	30,499	29,664	26,385
June	.....	15,131	14,543	13,508	14,939	13,010	.....	27,069	28,733	25,836	25,507	22,931
July	.....	12,878	12,429	11,588	11,893	10,994	.....	24,986	26,440	23,855	22,061	20,237
August	.....	11,875	11,797	10,996	10,953	10,442	.....	24,003	26,329	23,731	21,724	19,823
September	.....	12,269	12,171	11,446	11,960	11,631	.....	25,144	26,738	24,680	23,147	21,308
October	.....	14,849	15,475	14,337	14,536	13,477	.....	28,929	31,012	28,642	27,005	23,795
November	.....	20,250	20,757	20,499	19,441	17,531	.....	36,086	36,911	36,814	33,559	29,182
December	.....	27,726	28,949	26,328	25,108	23,303	.....	45,448	46,673	43,954	40,601	36,503
Total	.....	244,168	247,812	236,979	223,978	212,235	.....	418,517	441,738	412,711	374,546	345,348

Exhibit No. 169.

These tables, taken from the American Gas Association reports, are not comparable to data taken from the Bureau of Mines reports. The industrial figures shown by the latter organization include gas sold for field purposes and for the manufacture of carbon black while the Association excludes gas sold for such purposes. The Bureau of Mines also includes companies supplying mixed gas while the A. G. A. excludes them.

2507 Domestic sales show a wide seasonal variation, usually reaching their peak in January and dropping until August, in which month average sales are but a fraction of those of January. Because of the negligible variation in industrial sales and their preponderance in the total the latter shows only a samll change from month to month. Domestic revenues vary less than domestic sales, this difference being due, for the most part, to the prevalence of a fixed minimum monthly charge and a rate schedule based on progressively lower rates with increased consumption.

Trend of Consumption of Natural Gas by States

Domestic and Commercial Consumption

(Thousands of cubic feet)

	Arkansas	California	Colorado	Illinois	Kansas	Kentucky	Louisiana	Missouri	Montana
1926	7,824,000	20,960,000	78,800	203,000	10,133,000	12,404,000	4,413,000	5,288,000	1,383,000
1927	6,419,000	35,309,000	179,000	164,000	10,435,000	11,448,000	4,071,000	5,359,000	1,775,000
1928	6,785,000	37,702,000	629,000	52,000	12,008,000	10,753,000	6,127,000	6,129,000	2,346,000
1929	7,535,000	43,499,000	2,731,000	94,000	15,539,000	11,505,000	7,917,000	7,224,000	3,033,000
1930	8,338,000	47,519,000	5,141,000	115,000	17,320,000	10,674,000	8,574,000	9,158,000	3,635,000
1931	7,623,000	50,094,000	4,226,000	3,631,000	19,402,000	10,786,000	9,690,000	9,736,000	3,804,000
1932	6,963,000	60,926,000	5,383,000	16,113,000	20,275,000	10,135,000	9,406,000	11,684,000	5,352,000
1933	6,544,000	64,753,000	4,793,000	17,272,000	18,481,000	9,528,000	8,733,000	11,937,000	6,073,000
1934	6,770,000	58,618,000	4,296,000	19,628,000	18,414,000	9,500,000	9,876,000	12,109,000	5,991,000
1935	7,387,000	69,059,000	4,999,000	20,810,000	19,937,000	9,472,000	11,013,000	12,996,000	7,564,000
1936	8,483,000	69,258,000	5,601,000	22,468,000	22,665,000	10,410,000	13,080,000	13,962,000	8,600,000
1937	8,855,000	81,709,000	6,485,000	22,863,000	24,528,000	10,366,000	12,561,000	15,013,000	9,438,000

	Nebraska	New York	Ohio	Oklahoma	Pennsylvania	Tennessee	Texas	W. Virginia
1926	.....	16,909,000	87,672,000	17,617,000	56,148,000	5,500	18,045,000	25,700,000
1927	.....	15,036,000	83,654,000	22,298,000	51,794,000	9,000	20,517,000	23,406,000
1928	.....	16,391,000	88,511,000	23,185,000	52,971,000	.....	27,284,000	25,407,000
1929	.....	16,531,000	88,169,000	31,263,000	53,255,000	1,311,000	38,830,000	24,921,000
1930	180,000	16,915,000	90,879,000	28,206,000	51,974,000	2,246,000	41,058,000	23,824,000
1931	1,163,000	15,437,000	80,202,000	26,273,000	48,385,000	2,748,000	42,937,000	22,210,000
1932	2,605,000	15,122,000	69,698,000	20,478,000	43,491,000	3,116,000	39,728,000	20,055,000
1933	3,107,000	15,311,000	62,043,000	22,623,000	38,893,000	2,927,000	34,357,000	19,367,000
1934	3,459,000	15,899,000	64,048,000	23,138,000	40,695,000	3,088,000	36,213,000	20,747,000
1935	4,915,000	16,151,000	65,707,000	25,136,000	40,056,000	3,353,000	38,916,000	20,716,000
1936	5,810,000	17,060,000	69,852,000	27,734,000	43,891,000	3,930,000	43,987,000	23,271,000
1937	6,192,000	17,299,000	68,250,000	28,801,000	43,807,000	4,159,000	46,307,000	23,036,000

Exhibit No. 169.

Industrial Consumption

	Arkansas	California	Colorado	Illinois	Kansas	Kentucky	Louisiana	Missouri	Montana
1926	44,806,000	183,955,000	425,000	3,605,000	51,009,000	5,722,000	144,473,000	531,000	1,912,000
1927	34,497,000	177,055,000	1,365,000	3,877,000	56,183,000	5,246,000	166,239,000	1,225,000	3,680,000
1928	30,978,000	208,513,000	5,718,000	2,999,000	60,663,000	5,094,000	182,628,000	3,637,000	4,919,000
1929	32,223,000	298,715,000	11,631,000	3,045,000	59,937,000	7,943,000	192,860,000	7,854,000	6,299,000
1930	29,893,000	287,270,000	11,501,000	9,487,000	58,315,000	5,292,000	175,522,000	16,964,000	4,430,000
1931	24,655,000	251,201,000	11,500,000	10,919,000	46,207,000	4,747,000	122,296,000	14,527,000	4,555,000
1932	18,367,000	202,558,000	11,026,000	13,319,000	36,690,000	3,563,000	103,809,000	13,626,000	5,748,000
1933	16,231,000	195,046,000	11,049,000	16,069,000	38,551,000	3,694,000	107,067,000	15,646,500	6,149,000
1934	18,205,000	209,495,000	12,153,000	24,456,000	47,185,000	4,606,000	127,537,000	17,683,000	6,453,000
1935	19,089,000	215,050,000	12,234,000	36,509,000	52,869,000	[illegible]000	140,921,000	20,046,000	9,268,000
1936	22,503,000	251,148,000	14,112,000	50,048,000	59,360,000	7,749,000	153,405,000	26,162,000	11,294,000
1937	26,219,000	248,060,000	14,331,000	55,787,000	72,294,000	7,788,000	161,592,000	31,885,000	12,156,000

	Nebraska	New York	Ohio	Oklahoma	Pennsylvania	Tennessee	Texas	W. Virginia
1926	.....	955,000	28,047,000	227,376,000	69,688,000	6,000	169,296,000	47,084,000
1927	.....	1,138,000	28,949,000	264,187,000	70,188,000	.....	249,427,000	42,794,000
1928	.....	1,527,000	33,973,000	262,148,000	63,179,000	.....	291,434,000	41,865,000
1929	.....	1,661,000	38,462,000	298,032,000	69,653,000	4,084,000	426,696,000	48,935,000
1930	918,000	2,076,000	34,937,000	392,654,000	56,244,000	5,088,000	485,102,000	39,058,000
1931	3,654,000	1,519,000	27,258,000	222,676,000	44,244,000	4,875,000	404,695,000	32,905,000
1932	6,056,000	1,602,000	24,716,000	221,263,000	33,444,000	4,567,000	374,916,000	26,226,000
1933	7,186,000	4,601,000	30,719,000	219,871,000	34,734,000	4,442,000	378,071,000	27,566,000
1934	9,330,000	15,300,000	30,950,000	226,583,000	46,779,000	4,974,000	464,834,000	31,606,000
1935	9,395,000	19,554,000	40,189,000	233,462,000	51,545,000	6,126,000	486,781,000	33,047,000
1936	10,970,000	23,578,000	51,529,000	232,386,000	66,304,000	7,983,000	556,483,000	34,707,000
1937	11,071,000	32,781,000	56,883,000	280,803,000	75,694,000	9,194,000	659,813,000	42,359,000

Trend of Natural Gas Revenues by States
Domestic and Commercial Revenues

	Arkansas	California	Colorado	Illinois	Kansas	Kentucky	Louisiana	Missouri	Montana
1926	3,532,000	15,731,000	68,000	142,000	6,905,000	5,258,000	1,669,000	4,843,000	589,000
1927	2,900,000	30,125,000	105,000	116,000	6,893,000	4,917,000	1,482,000	4,841,000	763,000
1928	3,281,000	32,987,000	697,000	46,000	7,876,000	4,874,000	2,777,000	5,074,000	1,010,000
1929	3,661,000	37,785,000	2,524,000	79,000	9,391,000	5,238,000	4,275,000	6,176,000	1,290,000
1930	4,029,000	41,317,000	3,905,000	118,000	10,283,000	5,131,000	5,061,000	7,205,000	1,558,000
1931	3,884,000	50,094,000	4,226,000	4,569,000	11,145,000	5,460,000	5,565,000	7,615,000	1,706,000
1932	3,559,000	53,675,000	4,321,000	27,030,000	11,234,000	5,125,000	5,613,000	9,476,000	2,387,000
1933	3,320,000	55,575,000	3,961,000	22,892,000	10,080,000	4,823,000	5,210,000	9,783,000	2,492,000
1934	3,405,000	51,082,000	3,665,000	24,931,000	9,723,000	5,102,000	5,876,000	10,147,000	2,467,000
1935	3,649,000	59,253,000	3,979,000	26,387,000	10,487,000	5,285,000	6,410,000	10,851,000	3,101,000
1936	4,080,000	57,346,000	4,324,000	27,119,000	11,718,000	5,642,000	7,534,000	11,309,000	3,397,000
1937	4,224,000	64,468,000	4,824,000	27,070,000	12,411,000	5,629,000	7,612,000	12,025,000	3,737,000

	Nebraska	New York	Ohio	Oklahoma	Pennsylvania	Tennessee	Texas	W. Virginia
1926	.....	11,004,000	53,970,000	8,840,000	33,912,000	1,300	11,986,000	8,166,000
1927	.....	10,087,000	52,038,000	10,532,000	31,389,000	2,200	14,019,000	7,673,000
1928	.....	11,221,000	55,540,000	11,811,000	32,409,000	.....	18,305,000	8,394,000
1929	.....	11,130,000	56,271,000	13,929,000	32,707,000	1,280,000	24,878,000	8,624,000
1930	172,000	11,548,000	57,884,000	13,759,000	31,889,000	1,722,000	27,145,000	8,799,000
1931	1,037,000	10,703,000	50,581,000	12,475,000	29,855,000	1,911,000	27,906,000	8,203,000
1932	2,050,000	10,841,000	43,267,000	10,580,000	27,373,000	2,042,000	26,430,000	7,337,000
1933	2,341,000	11,656,000	38,079,000	9,426,000	23,979,000	1,981,000	23,497,000	7,058,000
1934	2,457,000	12,273,000	38,365,000	9,673,000	24,727,000	2,064,000	24,625,000	7,622,000
1935	3,667,000	13,308,000	39,030,000	10,506,000	24,474,000	2,267,000	26,152,000	7,499,000
1936	4,212,000	13,682,000	41,352,000	11,676,000	26,598,000	2,555,000	28,811,000	8,424,000
1937	4,421,000	14,133,000	40,131,000	12,068,000	26,416,000	2,724,000	30,100,000	8,224,000

Exhibit No. 169.

Industrial Revenues

	Arkansas	California	Colorado	Illinois	Kansas	Kentucky	Louisiana	Missouri	Montana
1926	3,495,000	20,694,000	57,000	721,000	7,476,000	861,000	5,243,000	154,000	61,000
1927	2,851,000	20,821,000	172,000	648,000	7,105,000	691,000	7,858,000	424,000	155,000
1928	3,366,000	23,708,000	1,150,000	314,000	9,135,000	1,594,000	10,359,000	828,000	514,000
1929	3,926,000	31,187,000	2,015,000	329,000	9,416,000	1,803,000	11,152,000	1,559,000	717,000
1930	3,253,000	27,754,000	1,540,000	1,558,000	9,226,000	1,460,000	11,169,000	3,120,040	676,000
1931	2,661,000	26,251,000	2,087,000	2,015,000	7,147,000	1,233,000	8,754,000	2,848,000	741,000
1932	1,989,000	19,497,000	1,915,000	3,529,000	5,234,000	942,000	7,158,000	2,492,000	972,000
1933	1,660,000	18,905,000	1,500,000	3,921,000	4,971,000	990,000	7,280,000	2,708,000	954,000
1934	2,210,000	21,601,000	1,621,000	6,001,000	5,703,000	1,247,000	8,927,000	3,080,000	967,000
1935	2,361,000	22,256,000	1,682,000	7,027,000	6,279,000	1,618,000	9,990,000	3,679,000	1,306,000
1936	2,498,000	25,046,000	2,188,000	9,211,000	7,191,000	2,026,000	11,486,000	4,817,000	1,531,000
1937	2,960,000	26,601,000	2,207,000	11,088,000	8,175,000	1,930,000	13,660,000	5,523,000	1,598,000

2508	Nebraska	New York	Ohio	Oklahoma	Pennsylvania	Tennessee	Texas	W. Virginia
1926	.....	439,000	12,012,000	24,411,000	22,812,000	600	18,821,000	10,171,000
1927	.....	427,000	12,220,000	22,971,000	23,084,000	.....	26,122,000	9,409,000
1928	.....	746,000	14,755,000	27,034,000	21,979,000	.....	35,965,000	10,237,000
1929	.....	929,000	16,110,000	29,676,000	24,193,000	901,700	40,696,000	11,398,000
1930	178,000	1,128,000	14,661,000	21,796,000	19,871,000	944,000	43,542,000	9,929,000
1931	746,000	857,000	10,837,000	13,688,000	14,504,000	899,000	31,420,000	8,334,000
1932	1,044,000	785,000	9,328,000	11,502,000	10,578,000	821,000	23,896,000	6,612,000
1933	1,249,000	1,534,000	10,607,000	10,921,000	10,203,000	807,000	22,556,000	6,646,000
1934	1,565,000	3,031,000	10,581,000	10,921,000	12,901,000	924,000	23,678,000	7,603,000
1935	1,626,000	3,892,000	12,934,000	9,766,000	14,073,000	1,116,000	23,634,000	7,456,000
1936	1,878,000	4,656,000	16,454,000	9,665,000	18,1[illegible]4,000	1,389,000	25,378,000	7,805,000
1937	1,947,000	6,166,000	18,459,000	11,299,000	21,112,000	1,608,000	29,644,000	9,072,000

The above tabulations of the Bureau of Mines show the trend of natural gas consumption by states over the past eight years. The figures include sales of mixed gas and consequently reflect the full effect of the extension of the long distance pipe lines. It should be noted in connection with this table that industrial sales in Texas and Louisiana include large quantities of gas sold for carbon black manufacture at prices as low as 1.6 cents per 1,000 cubic feet and for field purposes in Texas and Oklahoma at prices as low as 3.1 cents as compared with the average price of 10 cents for all gas sold for industrial purposes in 1937. Accordingly, total industrial sales are not a good index of the prosperity of the industry in the various states. Revenues from miscellaneous industrial sales, which reflect the growth of the consumption of the higher priced industrial gas, and domestic sales and revenues afford the best measurement of the essential development of the industry. California and Texas, which are two of the four largest consuming states, showed a tremendous expansion in domestic revenues during the period, Pennsylvania a decline and in Illinois, which is now the fourth largest domestic revenue producing state, domestic sales and revenues made practically their entire gains since 1930, mixed gas being introduced in and around Chicago in Oct., 1931. The greatest gains in recent years in industrial revenues occurred in Illinois, New York, Nebraska, Missouri, Montana and Tennessee.

Summary of Natural Gas Statistics, 1937

State	Production			Consumption									
				Domestic and commercial			Industrial						
							Field (drilling, pumping, etc.)		Manufacture of carbon black		Fuel at petroleum refineries, electric public-utility power plants, and other industrial consumption		
	Millions of cu. ft.	Average value at wells per M cu. ft. (cts.)	Average value at points of consumption per M cu. ft. (cts.)	Thousands of consumers	Millions of cu. ft.	Average value at points of consumption per M cu. ft. (cents)	Millions of cu. ft.	Value at points of consumption (thousands of dollars)	Millions of cu. ft.	Value at points of consumption (thousands of dollars)	Petroleum refineries	Electric public utility power plants	Other industrial	Value at points of consumption (thousands of dollars)*
Alabama	.....	.....	.....	29	1,877	88.9	.....	.....	.....	.....	.....	.....	14,716	$2,495
Arkansas	9,690	6.6	20.5	75	8,855	47.7	6,577	$501	.....	.....	3,391	2,695	13,556	2,459
California	329,769	6.6	27.6	1,573	81,709	78.9	140,743	9,229	.....	.....	32,619	15,554	59,144	17,732
Colorado	3,186	3.3	21.1	101	6,485	74.4	372	17	.....	.....	2	425	13,532	2,190
Georgia	.....	.....	.....	83	5,587	74.1	.....	.....	.....	.....	.....	3,596	4,710	1,408
Illinois	1,040	8.1	51.3	1,231	22,863	118.4	1,275	101	.....	.....	101	3,733	50,678	10,987
Indiana	1,551	14.6	64.2	121	2,160	101.8	152	17	.....	.....	354	7,864	13,021	4,606
Iowa	.....	.....	.....	118	5,118	90.3	.....	.....	.....	.....	.....	4,733	11,503	2,634
Kansas	83,890	4.2	36.2	221	24,528	50.6	21,762	1,634	†	†	5,588	16,357	†28,587	†6,541
Kentucky	55,719	12.2	41.1	176	10,366	54.3	1,220	158	.....	.....	.....	.....	6,568	1,772
Louisiana	315,301	3.4	17.1	177	12,561	60.6	32,022	1,987	39,406	$1,040	10,460	25,564	54,140	10,633
Michigan	9,080	9.6	62.1	536	16,034	117.2	1,072	104	.....	.....	2	.....	7,004	3,694
Minnesota	.....	.....	.....	143	4,984	97.6	.....	.....	.....	.....	.....	1,337	6,790	1,561
Mississippi	13,348	4.3	22.8	42	4,614	52.4	.....	.....	.....	.....	.....	1,410	7,308	1,132
Missouri	444	8.6	50.9	396	15,013	80.1	409	70	.....	.....	.....	8,306	23,170	5,453
Montana	24,765	3.7	26.9	39	9,438	39.6	1,501	98	.....	.....	580	691	9,384	1,500
Nebraska	.....	.....	.....	119	6,192	71.4	.....	.....	.....	.....	.....	2,819	8,252	1,947
New Mexico	46,337	1.5	16.6	20	2,343	58.1	16,414	378	.....	.....	104	3,436	5,759	1,348
New York	21,325	16.0	58.1	428	17,299	81.7	268	23	.....	.....	2,155	4,114	26,244	6,143
Ohio	42,783	16.0	46.7	1,268	68,250	58.8	2,569	443	.....	.....	20	3,738	50,556	18,016
Oklahoma	336,260	2.1	9.9	255	28,801	41.9	228,598	6,656	†	†	10,288	9,853	†32,064	†4,643
Pennsylvania	115,928	17.4	36.1	707	43,807	60.3	6,026	1,360	.....	.....	1,960	3,113	64,595	19,752
South Dakota	10	10.0	30.0	16	2,306	58.2	.....	.....	.....	.....	.....	968	2,245	550
Tennessee	17	5.9	35.3	45	4,159	65.5	.....	.....	.....	.....	2	4,880	4,312	1,608
Texas	854,561	2.3	15.5	631	46,307	65.0	211,612	7,261	291,199	3,032	40,247	42,845	73,910	19,351
West Virginia	149,084	12.9	39.3	193	23,036	35.7	12,162	2,083	.....	.....	686	62	29,449	6,989
Wyoming	31,023	3.2	16.1	23	4,705	37.5	6,515	241	†	†	4,442	429	†5,556	†798
Other	2,509	3.6	22.8	262	9,836	74.5	51	2	10,490	222	4	2,045	21,562	3,938
Total 1937	2,447,620	5.1	21.6	9,028	489,234	67.6	691,320	$32,363	341,085	$4,294	113,005	170,567	637,830	$161,298
Total 1936	2,167,802	5.5	22.0	8,674	454,969	67.1	618,468	28,397	283,421	3,681	93,783	156,080	554,397	138,051

*Includes value of gas ued at petroleum refineries and public-utility power plants. †Gas used in manufacture or carbond black included under "Other" for United States total under "Other industrial" for State total to avoid revealing figures of individual operators.

Interstate Transportation of Natural Gas

The total quantity of natural gas transported across the State borders in 1937 was 19% above 1936 and 45% above 1935 and aggregated 687,480,000,000 cubic feet, which was equivalent to about 28% of the total production compared with 24% in 1935. The principal interstate movements were from Texas, Louisiana and West Virginia, exporting approximately 203 billion, 153 billion, and 103 billion cubic feet, respectively. Louisiana shipped most of its gas to Texas, Arkansas and Illinois. Texas exported the most to Illinois, Kansas, Colorado, Missouri, Iowa, Oklahoma and Indiana, while West Virginia shipped the largest portions to Ohio and to Pennsylvania. The shipment of gas from the other states was not so large, but Kansas, Pennsylvania, Kentucky and Oklahoma exported between 41,000,000 and 45,000,000 M cubic feet each.

Consumption of Natural Gas Used with Manufactured Gas in the United States in 1936, by States

State	Domestic Consumers	Domestic M cubic feet	Commercial Consumers	Commercial M cubic feet	Industrial (M cubic feet)	Total M cubic feet	Total Value at points of consumption
California	4,950	162,000	320	48,000	46,000	256,000	$216,000
District of Columbia	137,810	2,458,000	6,480	281,000	365,000	3,104,000	2,289,000
Illinois	993,930	15,253,000	57,160	3,474,000	5,400,000	24,127,000	24,138,000
Indiana	28,770	349,000	1,270	75,000	30,000	454,000	523,000
Iowa	55,400	1,306,000	4,130	301,000	1,044,000	2,651,000	1,863,000
Kentucky	69,720	2,736,000	7,180	756,000	805,000	4,297,000	2,250,000
Maryland	13,670	237,000	280	6,000	9,000	252,000	231,000
Michigan	426,310	3,211,000	16,200	431,000	1,286,000	4,928,000	6,144,000
Minnesota	113,620	2,383,000	5,340	223,000	415,000	3,021,000	3,563,000
Missouri	216,020	2,446,000	11,180	316,000	315,000	3,077,000	3,154,000
Nebraska	53,150	934,000	330	47,000	116,000	1,097,000	713,000
New York	269,930	8,223,000	23,020	1,831,000	986,000	11,040,000	8,755,000
Ohio	156,030	2,256,000	15,110	730,000	611,000	3,597,009	2,214,000
Pennsylvania	49,170	1,177,000	4,280	267,000	102,000	1,546,000	1,214,000
Virginia	11,680	83,000	250	6,000	2,000	91,000	100,000
Total, 1936	2,600,160	43,214,000	152,530	8,792,000	11,532,000	63,538,000	57,367,000

2509

	Domestic Consumers	Domestic M cubic feet	Commercial Consumers	Commercial M cubic feet	Industrial (M cubic feet)	Total M cubic feet	Total Value of points of consumption
1935*	2,218,830	38,496,000	137,930	6,986,000	8,587,000	54,069,000	49,791,000
1934	2,012,530	35,587,000	134,220	6,345,000	7,038,000	48,970,000	45,446,000
1933	1,904,890	31,475,000	132,850	6,093,000	5,291,000	42,759,000	40,382,000
1932	1,853,170	33,489,000	129,620	6,556,000	14,340,000	54,385,000	48,933,000
1931	1,755,030	21,285,000	129,530	4,310,000	3,333,000	28,929,000	21,358,000
1930	450,140	18,068,000	50,580	3,472,000	2,358,000	23,898,000	4,881,000

* Revised figures.

The above table of the Bureau of Mines reflects the extension of natural gas pipe lines to cities and towns previously served with manufactured gas alone. The large increase in sales and revenues between 1930 and 1932 is due to the fact that the figures for 1930 and 1931 reflect sales for only part of the year, as natural gas was used in many cases for the first time in those years. Thus these figures do not represent the trend but, rather, the first phase of the utilization of the mixed product. Reflecting the sale of mixed gas in the city of Chicago since the latter part of 1931, the State of Illinois supplied by far the greatest amount of revenue from this source, revenues amounting to approximately 42% of the total in this country, while revenues from this source in New York constituted an additional 15%.

Development of Natural Gas Transmission

During the early years of the natural gas industry, the product was used only locally in the general territory adjacent to the fields of production. However, with the growing realization of its uses, and the discovery of large reserves, an extension of the area of distribution was undertaken by the construction of pipe lines similar to those used in the oil industry. There has been a steady expansion in pipe line mileage since the beginning of the industry. It was only in 1927, however, with the development of electric welding and other improved methods of constructing pipe lines that the construction of long, large-diameter, natural gas lines was begun. Construction of these lines increased through 1928, 1929 and 1930, but declined in 1931 and almost entirely stopped from 1932 to 1936. This decrease in new construction was due chiefly to the fact that the major projects holding most promise of success were completed or well under way before 1931.

No complete survey of natural gas pipe lines, covering mileage and sizes, has been made. However, the Federal Trade Commission estimated that as of June 30, 1932 there were approximately 52,000 miles of natural gas trunk lines in the country as compared with about 40,000 miles in 1929. Since 1932 few important lines have been built, the principal being from Douglas to Tucson and Phoenix, Ariz., from Rockville, Ind. to Detroit, Mich. and the additional capacity provided for these lines. In June, 1932, the natural gas lines were operated in all but 13 states (the six

New England states, Del., N. C., S. C., Wisc., Nev., Idaho and Oregon). Texas leads in mileage. Other states with extensive systems are Ohio, Oklahoma, Kansas, Louisiana, Mississippi, Pennsylvania, West Virginia, Arkansas, Kentucky, New York, Wyoming and California. The major pipe line systems consist of those running from the "Panhandle," Texas, to (a) Chicago, Ill., (b) to Omaha, Des Moines, and Minneapolis (c) to Detroit and (d) to Denver. There are other important lines between the Monroe-Richland District and (a) Atlanta, Birmingham and Montgomery, and other cities in the south, (b) St. Louis (Mo.) and (c) New Orleans, La.; the lines from the Kettleman Hills Field to San Francisco and Los Angeles in the far west, the line from Kentucky to Baltimore and Philadelphia via Washington, D. C., in the east, and the line from the Cut Banks Field in Montana to Helena, Anaconda and Butte in the northwest. Other smaller systems consist of the lines from the Louisiana Field to Monterey, Mexico, one from New Mexico to El Paso, Texas and to Bisbee, Douglas and Phoenix, Ariz., and from Wyoming to Salt Lake City and Ogden, Utah.

The extension of these trunk lines into areas which previously were not supplied with gas, and the sale of the fuel at wholesale to the companies formerly distributing manufactured gas in the cities en route is similar to the developments followed by the electric power and light industry in recent years. These developments necessitating physical connections and tie-ins encourage the consolidation of natural gas properties into larger and larger units. The phase of development consisting of the building of large trunk lines, although probably not yet completed, appears to have reached its peak. However, the expansion and extension of small lines from these trunk lines to large and small communities is still in an early stage of development. Conditions existing during the depression were not propitious to such developments, but with the lifting of the depression new developments along this line have been carried on. This phase of the industry is still quite young. In building long distance lines many problems arise, including the type of line construction, cost of the right of way, pressure of gas coming from the well and existing soil through which the pipe must pass, consequently construction costs vary widely, other factors include climatic conditions along the route, the maintenance cost of the lines and, most important of all, the possible market and the rate at which the gas can be sold there.

Regulation of Interstate Transmission

On June 21, 1938 Congress enacted legislation providing for regulation by the Federal Power Commission of interstate transportation and sale of natural gas for resale for ultimate public consumption. The principal features of the Act are summarized as follows:

1. The production and gathering of natural gas, local distribution and direct pipeline sales for industrial use are not subject to the Act.
2. Exports to and imports from foreign countries must be approved by the Commission.
3. Rates must be filed with the Commission and changes approved by the Commission, which may initiate hearings and suspend the effectiveness of rate changes for five months; the Commission may not suspend effectiveness of rate changes affecting sales for resale to industrial customers.
4. The Commission may determine the reasonableness of rates on its own motion or on complaint and may fix rates by its orders, except that it may not initiate rate increases; it may also determine costs where it has no authority to fix rates, either on its own motion or at the request of a regulatory commission.
5. The Commission may determine the actual legitimate cost and depreciation therein of physical property and may require the filing of physical inventories, the original cost thereof, and the cost of all additions and retirements.
6. The Commission may direct extension or improvement of facilities and the extension of service to local distributors adjacent to its facilities if the Commission finds no undue burden will be placed upon the company thereby. The Commission may not compel the above extensions, etc., if they would impair the company's ability to render adequate service.

No abandonments of property subject to the Commission may be made without permission based on either depletion of the gas supply or public convenience or necessity.

Certificates of convenience and necessity shall be obtained before a gas line may be extended to a market in which natural gas is already being served by another company. Policy in granting certificates of convenience and necessity should seek service at "lowest possible reasonable" rates.

7. The Commission may prescribe accounts, records, cost accounting procedure, etc., except that the company shall not be relieved from requirements of state law.

8. The Commission may require depreciation accruals at rates it prescribes.

9. The Commission may require reports, subpoena witnesses, etc., of operating companies, and may examine their records and those of companies directly and indirectly controlling them insofar as the latter's records relate to transactions with controlled operating companies.

Legal Investments

Public Utility bonds legal for savings bank investments in various States are tabulated in the blue insert. The bonds are arranged alphabetically with the legal status given for the States of California, Connecticut, Maine, Massachusetts, New Hampshire, New York and New Jersey. An additional feature following this tabulation are lists of public utility securities eligible for fiduciaries in New Jersey and Pennsylvania.

2510 EXHIBIT NO. 170.

Expanding Markets for Gas Industry Make Investments Sound

The gas industry today faces the future in a sounder and stronger position than at any time during the past decade, Percy S. Young declared in an address on "Investment Attributes of Gas Utility Securities," presented May 15 in San Francisco at the Executive Conference of the American Gas Association. Mr. Young is chairman of the Executive Committee of the Public Service Corporation of New Jersey and a past president of the Association.

After stating the many favorable characteristics of gas industry securities, Mr. Young cited the expanding market for gas. He summarized the principal segments of the gas market as follows:

(1) Cooking.—The modern gas range is a remarkable achievement. It is more efficient, excels and out performs any of its competitors. Public acceptance has been immediate and enthusiastic. The modern gas range has placed gas in a preeminent position in household economy. During the year 1938 over one million new gas ranges were sold.

(2) Water Heating.—This field offers one of the greatest opportunities for the expansion of a highly desirable load. Lower initial costs and substantial improvements in efficiencies have met customer requirements and public acceptance has followed. Sales of 740,000 water heaters in 1938 exceeded previous years' sales while the sales of many non-gas using major home appliances showed marked decreases.

(3) Refrigeration.—Gas refrigerators continued their extraordinary public acceptance and relative sales results were better than other types of automatic refrigerators during 1938.

(4) House Heating.—Faced with keen competition gas house heating has made outstanding gains. Manufactured gas sales for residential house heating increased every year throughout the depression, and in 1938 were almost four times the 1929 sales. Gas house heating entrenches the three other services of cooking, water heating, and refrigeration.

(5) Air Conditioning.—The market for air conditioning is rapidly growing. Air conditioning equipment can be used to good advantage wherever people live, work, or play. The application of gas-operated absorption type direct dehumidification equipment as applied to the air conditioning field is making excellent progress. Air conditioning has been termed the nation's next great business. It carries a great opportunity for the gas industry.

(6) Commercial and Industrial Use.—The future of commercial and industrial gas sales is decidedly bright. The steadily increasing demand and acceptance of gas in this field over the past nine years, when, despite adverse business conditions, sales increased almost 30 per cent, indicates the commanding position attained by the industry.

2511 EXHIBIT NO. 171.

Gas—July 1939 19

The Investment Attributes of Gas Utility Securities

By Percy S. Young

Public Service Corporation of New Jersey, Newark, N. J.

The soundness of the gas industry from the long term point of view is unquestioned. It is one of the three large public utility industries using the public streets for the service of the public. The approximate investment in plant and equipment of these industries as of January 1, 1938, was: electric, light and power—$13,000,000,000; telephone (Bell Companies)—$4,400,000,000 and gas—$4,400,000,000. From 1929 to 1937 there was invested approximately $2,000,000,000; $300,000,000; and $400,000,000 in the electric light and power, telephone, and gas industries, respectively. While operating income decreased for all three industries during this period, it is significant that this decline was in face of a substantially smaller amount of new invested capital on the part of the gas industry. During the 10-year period from 1929 to 1938, which except for the first year broadly covers a period of depression, it is found that each of these industries has shown remarkable stability. Revenues were as shown in Table No. 1.

From 1929 to 1933, the low point of the depression in revenues of only 19½ per cent for the telephone industry, while the decline for the electric light and power industry and the gas industry was only 9½ per cent and 13 per cent, respectively.

Investment Characteristics

Investment in plant and equipment by the gas industry is in property of long life accompanied by low rates of depreciation. It does not suffer the substantial plant losses which often accompany revoluationary technological changes in many other industries but can benefit from the technical improvements now being developed for more efficient production. Its raw materials are not subject to

wide price fluctuations and its by-products are bringing an increasingly larger return because of a widening demand. The amount of labor employed is small in relation to total expenditures for production and distribution. It is relatively free from political attack and direct governmental competition. The prospects for obtaining a balanced load with greater diversity are improving and should result in a greater utilization of plant. Its rates are generally competitive and are subject to adjustment

---

Mr. Young, who is chairman of the executive committee, Public Service Corporation of New Jersey, Newark, N. J., presented the paper, "Investment Attributes of Gas Utility Securities," before the Executive Conference of the American Gas Association, Fairmont Hotel, San Francisco, Calif., May 15, 1939. Excepts from this paper are published herewith.—Editor.

---

upward without appreciable loss of business under the present system of state regulation should economic changes require such revision. Because of its stability, lower ratios of earnings to fixed charges can be maintained without detracting unduly from the investment appeal of its senior securities.

Investor Experience

The author is indebted to Dean John T. Madden and Dr. Herbert B. Dorau of New York University for statistical material recently prepared under their direction dealing with the experience of investors in public utility securities during recent years. This analysis necessitated a study of the following factors: (1) the changing market value of the securities; (2) the extent to which interest and dividends were paid; (3) receiverships.

They point out that usually there is a tendency to understate or overstate the investor's relative status at specific times by ignoring the interest and dividend record and by measuring it only in terms of the market value of the securities which he holds. The maintenance of interest and dividend payments over an extended period should be given at least as much weight as the record of market price. Furthermore, the record of receiverships among divisions of the industry and a comparison with other in-

dustries is valuable in testing the experience of investors in a selected industry.

The experience of investors in gas utility securities has been exceptionally favorable. The record indicates unquestionably and that they have been underrated, and that they compare quite favorably with the record of straight electric and combination electric and gas company securities.

Market Value Changes

The survey of the amounts invested in public utility bonds and preferred stocks of both holding and operating companies by types of service and a comparison of relative profits and losses, as measured from issue prices, illustrate how the holders of securities of each type of service fared on selected dates over an extended period including one of the worst deflations on record.

The distribution of public utility bonds in terms of type of service is shown in Table No. 2.

Although a large proportion of the total invested of over six billion dollars is represented by issues of straight electric and electric and gas companies, it does not detract from the value of comparison and an examination of relative profits or losses as measured from issued prices is interesting. (Table No. 3.)

As of December 31, 1933, the date at which the maximum loss was recorded, the bonds of straight electric companies were selling 29.9 per cent below issue price; the issues of gas and electric companies 21.9 per cent and gas companies 24.3 per cent. On December 31, 1936, the bonds of straight electric, gas and electric, and gas companies had all advanced above issue price and were 1.3, 2.0, and 2.2 per cent, respectively, above their issue prices. The issues of gas companies declined slightly more rapidly in the earlier years of the depression than straight electric and combination electric and gas issues. Except for the issues of combination electric and gas companies, they did not, however, decline nearly so far at the end of 1933 as the other issues. Furthermore, their recovery from this point on was more rapid than any of the other issues.

The analysis of the market experience of public utility bonds from 1929 to 1937 as compared with that for other groups of bonds indicates that the record of electric and gas operating company bonds was distinctly better and further that the record of utility holding company bonds was relatively better than the other groups of bonds.

2512 **Table No. 1. Revenues from Sales to Customers (1929–1938)**
(Millions of Dollars)

Year	Electric Light and Power	Gas	Telephone (Bell Companies) (Local and Toll Service Revenues)
1929	$1,938	$785	$1,045
1930	1,990	797	1,076
1931	1,975	768	1,049
1932	1,813	723	933
1933	1,754	682	841
1934	1,831	701	850
1935	1,911	727	899
1936	2,044	767	971
1937	2,180	800	1,024
1938 (Estimated)	2,172	786	1,024

Table No. 2. Distribution of Cost to Investor of Public Utility Operating and Holding Company Bonds by Types of Service (Dec. 31, 1936)

	Number of Companies	Number of Issues	Cost to Investor (Millions of Dollars)	Per Cent
Electric	129	342	$4,089.8	67.4
Gas	31	58	396.5	6.5
Gas and Electric	49	131	1,206.7	19.9
Electric and Traction	8	17	178.8	3.0
Gas, Electric and Traction	6	18	191.9	3.2
Total	223	566	$6,063.7	100.0

Table No. 3. Per Cent Profit or Loss on Public Utility Bonds by Type o Service for Selected Dates (1929–1936)

Date	Electric	Gas and Electric	Gas	Elec. and Traction	Gas. Elec. & Traction	Total
Sept. 20, 1929	— 2.2	+ 0.7	— 3.1	—2.1	— 3.6	— 1.7
Dec. 31, 1930	— 1.2	— 2.1	— 4.5	— 2.3	— 2.5	— 1.7
Dec. 31, 1931	—16.2	—15.5	—21.7	—18.5	—21.4	—16.6
Dec. 31, 1932	—15.6	—12.4	—15.2	—22.1	—26.9	—15.3
March 1, 1933	—20.4	—16.4	—18.8	—26.0	—35.8	—20.0
Dec. 31, 1933	—29.9	—21.9	—24.3	—34.0	—43.5	—28.1
Dec. 31, 1934	—15.0	—10.2	— 9.4	—15.1	—29.7	—13.9
Dec. 31, 1935	— 2.3	+ 0.6	— 0.4	— 4.9	— 5.1	— 1.7
Dec. 31, 1936	+ 1.3	+ 2.0	+ 2.2	+0.5	+ 5.6	+ 1.6

An analysis of public utility operating and holding company preferred stocks by types of service showing the per cent profit or loss over the same period reveals that except for a sharper decline it follows the same general pattern as outlined above with respect to public utility bonds.

Dividend Record

A survey of interest paid on public utility operating and holding company bonds for the years 1930 to 1936, indicates that the record of interest payment has been very good and that the experience of gas utility companies within this group compared favorably with all other utility companies.

In a study of the income record of public utility preferred stocks, Jules Backman in the January, 1939, issue of Trusts and Estates arrives at the following conclusion: A comparison of the dividend experience of public utility gas and electric operating companies with that for other industries for the years 1933 and 1936 indicated that the record of dividend payments of electric and gas operating company preferred stocks was much more favorable than industries other than food and tobacco. These latter two industries reflected a high degree of stability in their dividend records and their record was about the same as that for public utility gas and electric operating companies.

A comprehensive analysis of receiverships for the years 1931 to 1936 has been compiled by Dean Madden and Dr. Dorau. This study shows that the receivership record with respect to electric, manufactured gas, and natural gas operating companies during the period under review was remarkable.

Manufactured gas operating company capitalization involved in receivership amounted to 2.4 per cent of the capitalization. That of electric operating companies amounted to 1.6 per cent of the fixed capital of the industry, while that of natural gas operating companies amounted to 6.4 per cent of the fixed capital of the industry. Involved in receiverships or defaults were 21.7 per cent of railroad capitalization despite the assistance of the Reconstruction Finance Corporation.

The data for foreign securities shows 38.5 per cent in default, real estate securities 61.7 per cent in default, and

municipal securities five to 10 per cent in default. These, however, are not strictly comparable with the records for public utilities and railroads since the one deals with default while the other is concerned with receiverships. The comparison does, however, give a fairly good indication of the relative status of these types of securities as compared with securities of electric, manufactured gas, and natural gas companies.

The Industry's Future

The investment merit of the securities in any industry, obviously, is primarily dependent upon the status and future of that industry. The gas industry today faces the future in a sounder and stronger position than at any time during the past decade. During the past few years the industry has developed new vitality. While significant increases have been recorded during recent years in commercial, industrial, and house heating sales an even more important development occurred in the year 1938 during which residential sales, the base load of the industry, reversed their downward trend. For the first time since 1930 sales of manufactured gas for domestic purposes, which had suffered from adverse economic conditions, competing services and a change in customer usage, showed an upturn amounting to 1½ percent and this upturn has continued with increasing momentum during the current year.

Despite a general business decline the manufactured gas industry expanded and progressed during 1938. Over 17,100,000 customers were served by the entire gas industry during the year, the largest number ever supplied with gas, representing an increase of 180,000 over those served in 1937, a year of much higher business activity. Total manufactured gas revenues and sales increased over two per cent, while at the same time the revenues of many industries suffered declines ranging from 20 to 50 per cent.

2513

The national advertising program, now in its third year, has been continued in harmony with an aggressive merchandising and sales promotional campaign. The results of this movement have demonstrated that the industry previously had not sufficiently publicized its development, the uses for gas, its superior efficiency, cleanliless, con-

venience, dependability and economy, and the tremendous strides recently made in the appliance field.

Gas for the four big domestic jobs—cooking, water heating, house heating, and refrigeration—offers the opportunity for one of the greatest advances in the history of the industry. The increasing public selection of gas as the fuel for the major household jobs is another indication of the preferred position of gas in the modern home.

The industry has recently completed a survey covering the utility characteristics of more than 104,000 one and two family homes constructed in 1938, this accounting for nearly 70 per cent of the entire number of one and two family homes built in the United States last year. For this group of more than 104,000 new and modern dwellings, of which 68,000 were located in the territory of natural gas companies, 88 per cent reported the use of gas for cooking, 74 per cent reported gas for water heating, 57 per cent used gas for house heating, while 12 per cent reported the installation of new gas refrigerators.

The amount and quality of research in all phases of the business is an outstanding achievement. Gas companies and manufacturers supplying the industry are engaged in extensive programs of development work. Revolutionary improvements have been made in ranges, water heaters, refrigerators, and other domestic appliances and further improvements are in prospect for the future. Commercial and industrial applications of gas are making notable progress. New developments in methods of producing higher B.t.u. manufactured gases, higher pressures, increased utilization of by-products, and improved efficiencies in gas production and distribution are on the horizon. Scientific investigation has not been confined to chemical and mechanical problems. Management is developing more effective rate structures, promotional activities, market analyses, cost analyses, and other aids.

The market for gas today is secure and the author is of the conviction that the field for gas in the home and industry will witness continued expansion. Let us examine briefly the principal segments of the gas market.

1. Cooking.—The modern gas range is more efficient, excels and out perform any of its competitors. During the year 1938 over one million new gas ranges were sold.

2. Water Heating.—Sales of 740,000 water heaters in 1938 exceeded previous years' sales while the sales of

many non gas using major home appliances showed marked decreases.

3. Refrigeration.—Gas refrigerators continued their extraordinary public acceptance and relative sales results were better than other types of automatic refrigerators during 1938.

4. House Heating.—Manufactured gas sales for residential house heating increased every year throughout the depression, and in 1938 were almost four times the 1929 sales.

5. Air Conditioning.—The application of gas-operated absorption type direct dehumidification equipment as applied to the air conditioning field is making excellent progress. Air conditioning has been termed the nation's next great business. It carries a great opportunity for the gas industry.

6. Commercial and Industrial Use.—The increasing demand for gas in this field over the past nine years has increased almost 30 per cent.

Conclusion

The high rank attained by investments of the securities of soundly financed and well managed electric companies and combination electric and gas companies is well merited. From the facts presented, this position should be shared by the securities of soundly financed and well managed companies distributing manufactured gas, mixed manufactured and natural gas, and natural gas companies having reserves adequate to meet requirements for a long period of years.

It has been shown that the gas business has a frontier still to be developed and that it is in a sound competitive position for all the uses in which fuel can be utilized for domestic, commercial, and industrial purposes. The industry looks upon past achievements as mere stepping stones to the broader fields of service which lie just ahead.

2514 EXHIBIT NO. 172.

A Banker Analyses . . . Natural Gas Industry Investment Values

By Frank R. Denton
President, Mellon Securities Corp.,
Pittsburgh, Pa.

During the past twenty years, the development and growth in the use of natural gas has been enormous and with its increase of importance has come a material change in the attitude of the banking and investment community toward the industry.

High Credit Standing

Today your industry can borrow money at less cost than at any time in its history. In 1929 fifteen-year United States Government Bonds were selling to yield 3.4% while today fifteen-year Government Bonds yield 2.2%. This reduction of 1.2% presumably reflects the change in money rates for Government obligations are relatively risk free. During this same period the yield on bonds of some natural gas companies has been reduced twice as much as the yield on Government issues. In fact the yield on some of your industry's bonds is very comparable to that for Government issues if the tax free feature of Government bonds is considered.

The obligations of natural gas companies are today held in large blocks by insurance companies and other large investors in contrast to their small investment in the securities of your industry a few years ago. This record gives evidence of the improvement in the general credit rating of natural gas obligations. In order to understand these changes, it may be well to review the history of the industry as it appears to a banker.

The history of the natural gas business early in this century is primarily the development of larger gathering systems reaching more distance markets through larger and longer transmission lines. The story of the success of that development from a banking, investment and credit

Part of address before annual convention, Natural Gas Section, American Gas Association, Tulsa, Okla., May 9-11, 1939.

viewpoint can be traced directly to the linking of widespread reserves including connections between companies, thus insuring dependability of supply for a known period of time.

In the past five years the natural gas industry has reached the highest credit standing in its history. Today, it can borrow money at less cost than ever before. Since 1929, Mr. Denton points out in the accompanying article, the yield on bonds of some natural gas companies has been reduced twice as much as the yield on Government issues.

These facts reflect a significant change in the attitude of bankers and investors toward the natural gas industry. What are the reasons for this change? Mr. Denton, a national banking authority, gives four principal factors together with a word of caution against over-expansion.

In the early 1920s, two things occurred which marked another era in the natural gas business, and which taken together greatly increased its national importance. The first of these was the discovery of vast new supplies of gas in the South and Southwest. Many of these important discoveries were made in the search for oil by our friends in the petroleum industry who from the beginning have been closely associated with your business. The second was the development of greater economy in long distance transmission of gas through better trenching and pipelaying methods, and material advances in the art of pipe manufacture. Your industry has been fortunate in having the cooperation of steel manufacturers, with their extensive research facilities and aggressive management, for they have provided you with the facilities for gas transportation which have made the recent expansion possible.

Even with large known reserves and practical methods of transmission, the industry was not yet especially popular with investors because it was still considered somewhat speculative and money for the new long distance pipe lines was mostly obtained through the credit backing of parent utility and oil companies. Many of the great new long distance pipe lines reached completion during the worst of the Depression and some met with considerable financial difficulties. In spite of all the difficulties, either financial or those connected with warm winters or

poor business conditions, markets have been obtained, the industry has established itself and in the past five years has reached the highest credit standing in its history.

Such is perhaps the conception of the average banker or investor of the development of the natural gas business to the position is occupies today.

Confidence in Natural Gas

We may ask ourselves what are the principal reasons for the present high credit position of the natural gas industry and what it is that makes the banker and bond buyer so willing to advance funds to this industry. I believe the answer is that in the first place the banker, the bond buyer and the consumer are thoroughly convinced of the value of natural gas as a fuel. In the second place they are convinced that adequate gas reserves exist and are available to the companies in which they are interested and they realize that long distance transmis-
2515 sion of gas from these reserves to the large markets is practical. In the third place the industry has been realistic in its attitude with respect to methods of financing, and finally the industry has had competent management.

I am sure that I was not invited here to preach a sermon, but it is a good opportunity to say one or two things that mean much to the banker, and I believe also to the industry.

First, past success should not mean the abandonment of sound standards of financing. Some 30% of this country's railroad mileage has gone into receivership, perhaps in part because debt was regarded more or less as a permanent fixture and not as something to be paid over a reasonable period of time. The natural gas industry should profit by the experience of other industries and be willing to devote a reasonable portion of its earnings to the retirement of debt.

The other thing that I wish to mention is expansion. No one is more desirous of adequate development of a natural resource than a banker. On the other hand, speaking only as a layman who doesn't have a fraction of the knowledge of you gentlemen as to where gas can be found I doubt whether the Almighty made gas reserves inexhaustible, and I wish to leave with you my hope that the enthusiasm of the industry for rapid development of its

markets will not outrun the development of known reserves and that new pipe lines will not be built beyond the capacity of the known and securely available supplies of gas, for the sake of the investor, the consumer and the banker, about whom I was invited to talk.

In conclusion, it is my opinion that the natural gas industry has a most promising outlook. There is every reason to believe that with the continuation of its capable management, it will be a source of satisfactory profit to its stockholders and a leading utility in the communities which it serves, for many years to come.

2516. EXHIBIT NO. 173.

Gas—May 1939 37

A Stock Broker Analyzes The Natural Gas Industry

By John Nickerson III

Partner, Winslow & Douglas, New York City

In selecting a security for a customer, the investment analyst tries to answer two questions about the industry represented by the security. The first is "Has this industry a proper degree of permanency or security?"

In any investment program, the element of permanency is very important. Suppose a client purchases a security and it goes down in price. If the industry holds its own, theoretically at least, the security will eventually come back to or even surpass the price paid for it.

The second question is almost a corollary of the first, "Has the industry the ability to expand profitably?"

While the proverb, "An industry is born but to die," is subject to a good many interpretations, it is a good one to keep in mind. If an industry year after year loses its customers and increases its expenses, watch out, for however attractive its securities may seem because of high yield or other reasons, it is giving statistical signs of disappearing from the economic horizon.

With these two questions in mind let us look at the natural gas business. But before plunging into present day trends, we must begin at the beginning.

A Speculative Beginning

As we all know the natural gas business had its start amid hectic and wild speculations. The millions of cubic feet wasted through ignorance, through the fond belief that there was no end to the magic supply must cause operators of natural gas properties to grieve even today.

The bible says, "The sins of the father are visited on the children to the third and fourth generation." It is the memory of such profligacy which haunt the minds of the investing public today. As one banker said to me, "What happens when the gas is all gone? You can's spit through a pipe line."

I bring this up for the reason that in my opinion when the natural gas industry wishes to raise equity money through the sale of common stock, it will have to convince the public (1) that it is making every effort to conserve the gas, (2) that new discoveries of gas are more than keeping up with the consumption of gas.

Ralph E. Davis, an engineer high in the regard of the oil and gas business, writes in an article which appeared in Gas (June 1938):

"Some three years ago, I had an occasion to estimate the known gas reserves of this country and at that time placed the figure at 62 trillion cu. ft. A similar survey just completed has given a figure of 66 trillion ft. Thus it is seen that new discoveries of natural gas have been in excess of current deliveries and that taken as a whole the gas reserve position of the industry is quite secure."

On the subject of "gas conservation," N. C. McGowen, president of the United Gas Public Service Corp., stated before the Natural Gas Convention held at New Orleans in 1938:

"Conservation of our natural gas reserves and conservation in the production, transmission and utilization of natural gas has been faced positively by your gas association and the gas companies themselves, and the gas industry can pride itself on accomplishments in this regard during the past 10 years. We have encouraged sound conservation policies and have advocated sound conservation laws with proper enforcement. Realizing the importance of proper utilization of gas produced with oil, we recently have been supporting actively studies designed to permit

the proper use, in an orderly manner, of more of the gas produced with oil, heretofore blown to the air and wasted."

The present day methods of operating a natural gas company as a producing, transporting and distributing unit may be said to have started in the early 1920's. Up to this time natural gas operations were essentially local situations and performed by many small corporations. This decade saw the formation of such corporations as Cities Service Co., Lone Star Gas Corp., Oklahoma Natural Gas Co., Interstate Gas Co. and others. At the same time the then existing corporations such as Columbia Gas & Electric Corp., Pacific Gas & Electric Co., Pacific Lighting Corp., expanded tremendously. In the South the Moody-Seagraves interests were rapidly building up what was to become the United Public Service Co. system. Certain of the oil companies (particularly Standard Oil of New Jersey) developed such properties as the Peoples Natural Gas Co. and the Hope Natural Gas Co. The year 1929 arrived with the natural gas companies expanding as fast as they physically could.

The year 1930 came and went with the country still hopeful that conditions of prosperity would return; 1931 came and went with hope beginning to go. With 1932 came a dull fear called depression that engulfed the country like a tidal wave.

What happened to this comparatively new industry called natural gas? Did it have that investment element called "permanency"? During a period of unprecedented deflation plus extraordinary rate cuts, only three important companies constituting about four per cent of the gross of the entire industry were forced to the wall.

At the Bottom, a Rise

From an operating standpoint even during this period of depression, the answer to our second question is given. In 1929 total customers using natural gas were 5,848,000. In 1932, the low point of the depression, total customers had risen to 6,082,000, an increase of 234,000.

If this business can increase during a time of deflation, it should increase during a period of comparative prosperity. And so it proved.

From 1932 to 1937 the number of customers had risen to 7,006,000, an increase of 924,000 or 15 per cent. During

this same period, gross revenues went from $340,000,000 to $441,000,000, an increase of nearly 30 per cent. Net income rose from $43,000,000 to $74,000,000, an in-
2517 crease of 72 per cent. These figures make pleasant music to an investor's ear.

But looking for the most part into holding company reports is a story of a development of an industry within an industry which is as amazing as any development occurring in the 1920's, namely, the high pressure, long distance natural gas transmission company. These companies sell only at wholesale to other utilities or to large industrial companies.

It appears as if the first bonafide wholesale long distance natural gas transmission line was the formation of the Colorado Interstate Gas Co. in 1927. This was for the purpose of transporting gas from Clayton, N. M. to Denver, Colo., a distance of 350 miles. In pick succession came Mississippi River Fuel Gas Co. (Louisiana to St. Louis—450 miles); El Paso Natural Gas Co. (Texas to Phoenix, Ariz.—200 miles); Southern Natural Gas (Louisiana to Macon, Ga.—462 miles); Natural Gas Pipe Line of America (Oklahoma to Illinois—950 miles); Northern Natural Gas Co. (Oklahoma to Minneapolis, Minn.—960 miles); Panhandle Eastern Pipe Line Co. (Texas to border of Indiana—850 miles).

By 1933 these long distance pipe lines were in full operation with the exception of Panhandle which had not yet tied in with Detroit. In this year the total gross revenues of the five leading long distance pipe lines was approximately $25,000,000 with a net loss of over $3,000,000. In 1937, the total gross revenues had risen to $57,000,000 with a net profit of $17,000,000.

Holding Companies Did It

It is a commentary on the times that the holding company which is the political scapegoat of the day quietly and unobtrusively financed and built a whole new industry during the depression, a time when jobs and money to finance them were as nuggets of gold.

This same political force which is relentlessly pursuing "big business" and other reasons such as necessity for additional financing, due to inevitable extension programs, will eventually oblige the transmission companies to look

to the investing public for the necessary financing. The common stock of El Paso Natural Gas Co. and Southern Natural Gas Corp. are available in the security markets. Indirectly, Colorado Interstate Gas Co. and Natural Gas Pipe Line Co. of America (the Chicago line) may be purchased by buying Mission Oil Co. stock. In the same way an interest in Panhandle Eastern Pipe Line Co. may be acquired through Missouri-Kansas Pipe Line stock.

The year 1938 was a second test of the natural gas companies. On top of a spectacularly warm winter, industrial consumption was far from normal due to the inert year of 1938. But again the natural gas companies acquitted themselves very creditably. In nine important producing and distributing companies the gross income for the year 1938 was off six per cent and net income off 27 per cent. These two percentage figures are exaggerated because one of the companies which is included in the above tabulation gets a good percentage of its gross from the oil business which was very adversely hit during the past year.

Efficient Management

Examining the annual reports of the important companies, one is impressed that without exception, expenses are being held in line with gross income.

A good example of efficient management may be found in the 1938 annual report of the Peoples Gas, Light & Coke Co., an important distributor of natural gas:

"Operating expenses exclusive of the item of taxes, were $911,010 less than in 1937. Decreased expenditures for gas purchased and produced, due to reduced sales, accounted for the principal reduction in operating expenses. Unaccounted for losses were less both in volume and percentage send-out, than in 1931, and this was also partly responsible for the decreased expenditures for gas."

Another encouraging sign is that the managements are taking advantage of the current money market to refund all fixed income obligations on a more favorable basis wherever possible. Note may be made also of the attempt of some of the companies to space their bond maturities so that the whole funded debt may not fall due in any one year and also to provide for debt retirement by adequate sinking funds.

An interesting statement appears in the Lone Star Gas 1938 annual report:

"During the current year conditions surrounding the security markets were more favorable than in past years, and your directors decided that the best interest of stockholders would be served by refinancing all outstanding bonds, bank loan notes and preferred stocks of your corporation and subsidiary companies, provided new securities could be issued on a basis favorable to the Lone Star group. * * * Negotiations with underwriters and bankers indicated that new securities could be issued on a basis that would reduce the annual carrying charges, and provide for uniform maturities over a period of years, thereby avoiding the requirement of providing for peak maturities in later year."

Best of all, the customers of the natural gas companies are increasing. In practically every company, the rate of increase runs from three to five per cent over 1937. This fact indicates that the industry is alive and growing. It seems safe to assume that if the companies can get business during hard times, they can get a lot more business in good times with attendant profits to those that invest in their securities.

On this subject the annual report of the Oklahoma Natural Gas Co. states:

"Continuation of the construction of new homes is evidenced by the fact that the company has gained 5860 new customers during the year. * * * The addition of these new customers during the year and 16,182 during the past three years is a good indication of the stability and growth of the territory served."

A Look to the Future

Last, but not least, the annual reports of the different companies indicate that the managements realize the necessity of finding new supplies of gas and conserving those that they have. I quote from the 1938 annual report of the Pacific Lighting Co.:

"A deeper zone and extension were proved in the Kettleman North Dome field which is one of the most productive of the worlds known oil and gas supplies. Four new fields were discovered in the San Joaquin Valley, in one of which the discovery well was drilled to slightly over 15,000 ft.

bringing in the deepest zone in this area and opening up the possibility of new lower zones in existing valley fields. * * * It is estimated that of all gas produced in the state (California) in 1938, 90.3 per cent was delivered to pipe line systems serving gas customers, or utilized by oil and gas producing companies. This reflects an increase in unconserved gas due largely to the first flush production of new discoveries, and therefore may hoped to be temporary."

No financial discussion, or in fact any treatise on any subject whether it be economic, social or political is complete without some pointed reference to the constant increase of taxes. I could give figures on the amount of gross and net consumed in taxes, but they have been
2518 read in a thousand places elsewhere. If anyone, however, is curious enough to read an excellent analysis of the piercing, grinding, crunching, choking burden of taxes, which is bound to descend on this industry unless the present increase in taxes is stopped, I recommend he read the annual report of the Consolidated Edison Co. of New York. I am sure the company will send it to him on request.

To sum up, in my opinion the natural gas industry has given the lie to the oft-repeated statement that opportunity no longer knocks. It has answered in the affirmative the two questions which go through a stock broker's mind, namely, is the business permanent and is the business growing? From an investment point of view, ample yields are obtainable plus a large measure of possible appreciation for those investors who will study the securities of America's newest national industry, natural gas.

2519 **EXHIBIT NO. 174.**

The Gas Industry

Oldest Utility Gains New Vitality

With almost a century and a quarter of expansion and progress behind it, the gas industry in the United States has attained a new vitality in recent years and today occupies a strong position. In 1816, the first manufactured gas plant in this country was built in Baltimore, which then had a population of only about 56,000. Five years later,

the first commercial natural gas well was drilled at Fredonia, N. Y., and natural gas was used there for lighting in 1824. Thus, both phases of the industry in the United States actually antedate the opening of the Erie Canal, while the electric lighting industry, beginning operations in 1882, is only about half as old as the gas industry.

During almost the first seventy years of its existence, the gas industry enjoyed practically unchallenged growth in the field of illumination. Then, in the early eighties, the electric light changed the character of competition in the lighting business from a struggle between two or more gas companies to one between industries. To meet the challenge offered by electricity, the gas companies first improved lighting equipment and service, and then set out to cultivate a new and previously untapped market, the use of gas for domestic cooking. So successful was this program that by the time electricity had seriously cut into the gas lighting load, the use of gas for domestic cooking, water heating and similar purposes had increased to such a degree that the trend of total gas sales continued to rise steadily. This capacity to adjust itself smoothly and effectively to changing conditions is still one of the salient characteristics of the gas industry, as has been demonstrated within the last ten years.

Group Effort Aids Sales

Shortly after the depression set in, according to the American Gas Association, leaders in the industry, noting that sales per domestic consumer were declining, determined upon a group effort to reverse this trend. Not only did the domestic business constitute more than 70 per cent of the industry's total sales, but, in the average company, from 80 to 85 per cent of the total investment had been made for the service of the domestic customer. From these figures the importance of this domestic business to the industry is evident. A study undertaken to discover the reasons for the decline in sales per domestic customer revealed that changes in the living habits of the American people had materially affected the use of gas in the home.

The study disclosed, for example, that while between 1910 and 1920 the number of American families increased by about 20 per cent, the number of restaurant keepers during the same period increased by more than 50 per cent, the volume of business of commercial laundries advanced

by about 55 per cent, and the number of servants employed in homes and domestic establishments decreased by about 14 per cent.

2520 In addition, it was shown that from 1914 to 1925 the output of bread and other bakery products from commercial establishments rose more than 150 per cent, food prepared in commercial canning and preserving establishments nearly 180 per cent, and the preparation of foods in the so-called delicatessen category about 200 per cent.

In the field of building construction, it was found that whereas in 1921, 58 per cent of the families provided for in new buildings were to be housed in one-family dwellings, by 1927 this percentage had fallen to 38 per cent. During the same period, apartments or multi-family dwellings increased from 24 per cent of the total new construction to almost 50 per cent.

When these studies were made public in 1930, the gas industry was establishing new peaks in number of customers served, total sales, revenues and net income. Yet the leaders of the industry, as a result of the findings, decided on a program of action to anticipate and, as far as possible, turn to advantage the changes in the use of gas thus foreshadowed. In their program were reported aggressive merchandising and sales promotion activities, further study of the trends, and the formation of various committees for specific purposes.

Downward Trend Reversed

With the deepening of the depression, it became more apparent to the gas industry that it was being affected not only by the general economic conditions but also by the changes in public living habits affecting the use of gas in the home which continued, even after 1933, to exert a depressing influence. Consequently, merchandising and sales promotion activities were accelerated. In 1935, a national advertising campaign was inaugurated to bring forcibly to public attention "the numerous improvements that had been made in design and construction of gas appliances."

The establishment in 1924 of the American Gas Association Testing Laboratory, which tests more than 90 per cent of all makes of gas appliances sold in the United States and Canada, has made possible a steady and consistent increase by the laboratory in the basic national require-

ments for safety, durability and efficiency for its certification. Thus encouraged, improved performance of gas appliances has followed. Between 1927 and 1937, for instance, it is reported that the efficiency of the average gas range increased by some 15 per cent, and that of average gas water heaters rose by more than 30 per cent.

From 1929 through 1938, more than 11 million gas ranges were sold in this country, while sales of water heaters aggregated nearly six and one-half million, and gas refrigerator sales totaled 1,300,000. Last year alone, more than one million gas ranges were sold, and 740,000 new gas water heaters and approximately 185,000 new gas refrigerators were installed.

The progress achieved by the gas industry has been made against keen competition which has confronted it in practically all its fields of use. In most of the areas served by gas, the industry's advance has been accomplished despite the availability of coal, oil and electricity and of modern devices for their use. In brief, with the gas
2521 industry, as with other forms of private enterprise in the United States, competition has fostered progress.

Number of Customers Increases

Findings of a recently completed survey covering more than 104,000, or nearly 70 per cent, of the total number of one and two-family dwellings constructed in the United States last year show that use of gas for cooking was reported by 88 per cent, for water heating by 74 per cent, for house heating by 57 per cent, while 12 per cent reported the installation of new gas refrigerators.

A total of 17,135,000 customers, in 1938, an increase of 180,000 over the 1937 total, is the largest number ever served by manufactured and natural gas companies which supply towns and cities with a combined population of about 81,000,000. To provide service to these consumers, representing roughly three-fifths of all American households, requires a total investment in plants and equipment by the gas industry of almost $5,000,000,000.

According to preliminary estimates, revenues of the industry, including both natural and manufactured gas, amounted to about $786,576,000 in 1938, a decrease of 1.8 per cent from 1937. Sales of manufactured gas last year aggregated, it is estimated, $367,714,000, an increase of 2.2 per cent over 1937. Revenues of the natural gas com-

panies totaled $418,862,000, a decrease of 5.1 per cent from the preceding year.

Total sales of manufactured gas for domestic uses, other than house heating, were reported at 198,331,000,000 cubic feet, a gain of 1.5 per cent for the year. House heating sales gained by about 10 per cent, even though mild temperatures prevailed throughout the year in most sections of the United States. Sales of natural gas for domestic uses, which, it is claimed, are substantially affected by weather conditions, decreased from 359,294,000,000 cubic feet in 1937 to 350,143,000,000 cubic feet in 1938, a loss of 2.5 per cent. Sales of manufactured gas for industrial and commercial purposes gained about 1.0 per cent, despite business stagnation, increasing from 107,433,000,000 cubic feet, in 1937, to 108,507,000,000 cubic feet, in 1938, but sales of natural gas for industrial and commercial purposes declined from 784,632,000,000 cubic feet, in 1937, to 680,910,000,000 cubic feet, in 1938, a loss of about 13 per cent.

Record Natural Gas Output

The total production of natural gas last year, including the amounts used in making carbon black and for field purposes* was estimated at the end of the year to constitute a new record output of more than two and one-half trillion cubic feet, approximately 2.0 per cent above the previous all-time peak reached in 1937. This was approximately six times the comparable figure for three decades earlier.

Known proven reserves of natural gas in this country are believed to amount to between 60 and 75 trillion cubic feet, or at the current rate of consumption to about 25 to 30 years' supply. Authorities assert that continued exploration, improvement of drilling technique permitting penetration to greater depths and the search for petroleum are bound to uncover additional reserves of natural gas.

2522

With more customers, greater total sales and larger revenues last year than in 1929, the natural gas industry has proved its vitality during the depression. The following table shows the progress of the industry in terms of number of customers, volume of sales, and revenues from sales during the period from 1929 through 1938.

* More than a trillion cubic feet of natural gas are sold annually in non-utility sales for such purposes as the cracking of gasoline, field sales, etc., and for the production of carbon black.

Comparative Data on Customers, Sales and Revenue For Natural Gas 1929-1938

Thousands of Gas Customers at End of Year

	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
Domestic*	6,596	6,465	6,249	6,061	5,869	5,675	5,628	5,732	5,795	5,495
Commercial	510	501	485	465	444	430	427	416	358	331
Industrial	41	40	37	33	33	28	27	27	23	22
Total	7,147	7,006	6,771	6,559	6,346	6,133	6,082	6,175	6,176	5,848

Gas Sales to Consumers (Millions of Cubic Feet)

	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
Domestic*	350,143	359,294	338,989	319,806	302,449	299,382	319,636	339,562	346,904	334,336
Commercial	99,459	102,654	96,316	87,728	78,831	73,479	76,774	68,355	61,236	58,141
Industrial	581,451	681,978	623,194	519,713	465,765	385,714	328,389	359,565	460,092	484,265
Electric Generation	172,500	170,567	156,080	125,239	127,896	102,601	107,875	139,528	120,290	112,707
Total Ind. & Elec. Generation	*753,951*	*852,545*	*779,274*	*644,952*	*593,661*	*488,315*	*436,264*	*498,893*	*580,382*	*596,972*
Total	1,203,553	1,314,493	1,214,579	1,052,486	974,941	861,176	832,674	906,810	988,522	989,449

Revenue from Sales to Consumers (Thousands of Dollars)

	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
Domestic*	$244,063	$246,546	$235,771	$223,978	$212,235	$212,064	$226,488	$236,098	$235,877	$221,769
Commercial	47,381	48,152	46,070	41,945	38,046	36,838	38,637	37,483	33,573	32,112
Industrial & Elec. Gen.	127,418	146,534	128,766	108,623	95,067	79,222	75,586	90,605	114,374	120,201
Total	$418,862	$441,232	$410,607	$374,546	$345,348	$328,124	$340,711	$364,186	$383,824	$374,082

*Domestic includes House Heating.

Note:—These figures do not include natural gas used in field operations and in the manufacture of carbon black, or gas used by distributing companies in the conduct of their gas operations.

Companies selling mixed manufactured and natural gas are not included in these data.

1938 figures are preliminary estimates.

Source: American Gas Association.

Manufactured Gas Gains.

Since the low point of the depression in 1933, the use of manufactured gas, like that of natural gas, has steadily increased, each year showing a gain in the number of customers and in the output. In only one year, 1935, during that period, was there a decline in the total revenues from sales. Comparative data regarding number of customers, output and revenues from sales in the period from 1929 to 1938 are given in the following table.

These figures present statistical evidence of the progress made by the manufactured gas industry in recent years, particularly in house heating and in industrial and commercial uses, where the advances, it will be noted, have been both steady and marked.

Comparative Data on Customers, Sales and Revenue For Manufactured Gas 1929-1938

Thousands of Gas Customers at End of Year

	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
Domestic	9,289	9,276	9,063	8,957	8,837	8,708	8,776	9,186	9,280	9,264
House Heating	230	202	172	131	115	79	59	57	52	42
Industrial and Commercial	460	462	460	420	418	412	411	456	435	427
Miscellaneous	9	9	9	9	9	9	9	7	7	7
Total	9,988	9,949	9,704	9,517	9,379	9,208	9,255	9,706	9,774	9,740

Gas Sales to Consumers (Millions of Cubic Feet)

	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
Domestic	198,331	195,400	198,199	206,636	216,507	223,110	240,495	253,068	257,582	255,841
House Heating	50,164	45,600	41,226	35,040	28,181	20,037	18,983	19,128	17,598	13,608
Industrial and Commercial	108,507	107,433	100,109	86,419	77,567	67,589	67,609	84,478	90,712	93,368
Miscellaneous	2,243	2,130	2,197	2,133	2,059	1,997	2,245	2,028	2,287	2,161
Total	359,245	350,563	341,731	330,228	324,314	312,733	329,332	358,702	368,179	364,978

Revenue from Sales to Consumers (Thousands of Dollars)

	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
Domestic	$260,963	$256,853	$258,924	$265,379	$274,157	$279,285	$303,491	$311,850	$317,103	$315,703
House Heating	31,964	28,539	26,207	22,628	18,829	14,108	14,611	15,394	14,558	11,533
Industrial and Commercial	73,242	73,093	70,630	63,707	62,085	59,765	64,154	76,114	80,884	81,924
Miscellaneous	1,545	1,480	1,516	1,500	1,473	1,517	1,604	1,570	1,874	1,865
Total	$367,714	$359,965	$357,277	$353,214	$356,544	$354,675	$383,860	$404,928	$414,419	$411,025

1938—Preliminary Estimates.
Source: American Gas Association.

Manufactured gas is derived chiefly from coal and it is estimated that at present rates of use the United States has a coal reserve that will last more than 4,000 years. Even if coal were used to supply nearly all the nation's energy requirements, the United States is believed to have a sufficient supply for more than 2,000 years. The manufacturing gas industry, therefore, is not confronted with the problem of reserve supplies.

Development of Markets.

The most widespread use of gas, of course, is in supplying heat for cooking. Improvement in the gas range has been one of the chief factors in the growth in use of gas in this field. An important market for gas, both natural and manufactured, appears to be in the field of house heating and attention has been paid in recent years to this market.

The improvement of equipment, reduced rates in many areas, together with sales campaigns, have helped materially to increase the consumption of gas in house heating through central plant burners and other heaters. It is estimated that a total of 825,000 gas central house heating installations were connected to the lines of all United States gas companies in 1938. Approximately 1,400,000 dwellings, it is claimed, are heated by unit heaters, space heaters, floor furnaces and similar equipment. Thus, the total number of homes in this country heated by gas is estimated at more than 2,225,000.

2524 Domestic water heating also offers great opportunities for increased sales of gas and this market is likewise being cultivated through nation-wide promotional activities and widespread adoption of more favorable rates as well as through improvements in equipment.

Adoption of an all-gas home program, with a competition for architects and for builders, demonstrations, and similar features, has been helpful in expanding sales through stimulating a wider selection of gas and gas appliances in building construction planning and specifications.

A three-ye. r $1,500,000 national cooperative advertising campaign, financed by more than seven hundred gas and gas and electric companies, is credited not only with helping greatly to increase sales of gas itself, but with improving

both the quantity and quality of advertising by appliance manufacturers and by local companies and dealers. The success of this advertising program is attested by the announcement of a three-year extension of the campaign to July, 1942.

Outlook for the Industry

With more customers than it has served at any time in its history, with greater sales and revenues than it enjoyed in 1929, and with the continuation of sales and promotional activities which have proved effective, the gas industry seems to have reason to face the future with confidence. Its soundness has been tested during the depression and it has demonstrated its stability and its capacity for growth.

In a difficult period the industry has succeeded in expanding its market both in domestic and in industrial uses. Through improvement of appliances it has made its product more acceptable to consumers. Confronted with changing business conditions and habits of living, the industry has shown itself flexible enough to take advantage of these changes to improve its position in a highly competitive field.

The growth of the gas industry and its record in adverse times, therefore, indicate that with any upturn in business generally it may be expected to achieve even greater advances than those already made in its century and a quarter of orderly progress.

2525 **EXHIBIT NO. 176.**

The Fifth Big Job . . . Air Conditioning
A Challenging Opportunity

By Charles R. Bellamy

Columbia Gas & Electric Corp., New York, N. Y. Chairman, Industrial and Commercial Air-Conditioning Committee.

A few years ago a great many people, including numerous industrial leaders, were expecting a new industry called summer air-conditioning to lead us right out of the depres-

Abstract of paper presented at annual convention, Natural Gas Section, American Gas Association, Tulsa, Okla., May 8-11, 1939.

sion. But it has not done so, and probably will not, because air-conditioning costs real money. In return it offers more comfortable and healthful living conditions, thereby raising the standard of living, but, as we all know, living standards are closely related to income, and when incomes are low, improvements of this nature are regarded as luxuries.

Gas Position Improves

Instead of a phenomenal growth it has had a steady growth, from a gross business of $10,000,000 in 1931 to an annual business variously estimated from $65,000,000 to $90,000,000. In 1938 when general business declined more than 20% and plumbing and heating dropped 16% from the year before air-conditioning decreased only 11%. This is significant of the industry's position today, and it is indeed fortunate from our standpoint that the growth of air-conditioning has been rather slow but sure, because every year has seen a market improvement in the competitive position of gas equipment.

In speaking of the summer air-conditioning market it is advisable to distinguish between the actual present market and the potential market. The size of the first is based upon present cost of air-conditioning and present business conditions, while the second is dependent upon lower costs and improved business conditions.

An Analysis of the Market

First let us frankly survey the present market. Undoubtedly the most promising and largest outlet at this time is in the commercial field. The thousands of installations in department stores, restaurants, theaters, and other commercial establishments have yielded such good returns to their investors that competitors must either fall in line or lose out entirely. For this reason every store, shop, theater, hotel, hospital, school and church is at the present time a potential customer. Less than 25% of the large department stores now have air-conditioning, and only about 10% of the larger restaurants. There are therefore over 3,000 department stores that are excellent prospects, and close to 19,000 restaurants. In addition to this there are thousands of shops, theaters and hotels which, sooner or later, must install summer air-conditioning.

The second best outlet at this writing is probably the industrial field. Here the possibilities of summer air-con-

ditioning are just beginning to be appreciated. True, industrial air-conditioning is relatively old, but generally speaking these older installations were in factories and plants where control of temperature and humidity were obviously imperative. Now, however, the benefits of such control are being demonstrated in all kinds of industries, and the success of these new applications indicates a universal need of air-conditioning by industry.

At the present moment the actual available domestic market is probably only a fraction of the potential market. As the public becomes air-condition conscious, that is, acquainted not only with the comfort but also with the actual benefits of temperature and humidity control, and as general business picks up and equipment costs are lowered, the size of this market will expand. In this connection it is well to remember that every commercial and industrial installation has an educational value, and it is altogether possible that the popular demand for home air-conditioning will be accelerated by the completely air-conditioned automobile that is ready for marketing.

Large Business Predicted

Altogether the existing market for summer air-conditioning is large, and with the equipment costs reduced and operating performance improved this industry should soon do a gross business of over $100,000,000 per year. One large chemical company recently completed a survey of the air-conditioning market and reached the conclusion that this business should for some time continue to double every three years. One writer estimates a yearly gross of $350,000,000 sometime within the next ten years.

Just what percentage of this total business will go to gas it is impossible to say, but it should be a substantial amount. On the assumption that air-conditioning with gas will cost about $300 per ton of refrigeration effect, an annual gross business by gas equipment manufacturers of $100,000,000 would mean roughly 333,000 tons of new installation. Thus annual sales might readily develop a yearly gas load of approximately 9,300,000 M cu. ft. This should mean something like $5,000,000 of new business to the gas industry per year. In fact, one of our leading utilities, after a most thorough study, has set 10,
2526 000,000 M cu. ft. of gas as the annual new possible business of summer air-conditioning in this country.

Ourusoff,* in his comprehensive analysis of the residential market, found that this business alone might add around $2,260,000 of gross revenue per year for many years. Figure out what the cumulative effect of such additions would mean to our industry, and remember that every foot of such a load is off-peak business. Certainly, here is an opportunity worthy of the best efforts of our industry! It is indeed the ideal business for us.

In the light of past performance the figures which I have just given may appear optimistic, but ten years from now they may show up as a very conservative under-estimation. In any event, a large new market for fuel is opening up, and if the gas industry is to secure any appreciable portion of this market it must have confidence in its own product. Certainly vision, optimism and confidence are needed to plan our compaign; for faint heart never won fair lady.

New Capital Needed

Certain manufacturers have already spent large sums of money in developing processes and equipment; now new capital is needed to develop markets. Here is where the gas utility can step in and help. Gas air-conditioning equipment does not sell itself. It has to be sold. And I think our experience with house heating and refrigeration proves conclusively that successful merchandising of gas equipment requires the wholehearted backing of the local gas utility.

To put gas air-conditioning across, gas companies are going to have to participate with the manufacturers in a campaign of intelligent advertising and sound salesmanship. All this will cost money, but it should be money well spent for the summer air-conditioning load is the perfect supplement to our house heating business. At any given price for gas the air-conditioning load is far more attractive to the gas company than an equivalent volume of house heating business.

In the realm of general scientific research on the value of air-conditioning regardless of how achieved, recent developments have been most favorable to the cause of gas. As you all know, gas equipment lends itself peculiarly well to the control of humidity. In this connection the work of

* 1938 Report of Industrial and Commercial Air Conditioning Committee, Industrial Gas Section, American Gas Association.

the American Society of Heating and Ventilating Engineers during the past summer on the physiological reactions of men while carrying on light work in atmospheric conditions including effective temperatures from 77° to 92° with relative humidities of 60%, 75% and 90% is very encouraging. Similar tests, using somewhat dryer air, would appear to be desirable, and it seems to me that the American Gas Association should encourage work of this nature.

Tools Available Today

Now, let us examine carefully the air-conditioning tools that are available to the gas industry today:

Tool No. 1—The Gas Engine. Here is a tool especially suitable in certain locations for large commercial and industrial installations. The possibilities of expanding its field of application appear to be good.

Tool No. 2—The Dehumidifier. There are at least three well-designed gas-operated dehumidifiers on the market. Here is a tool that has been greatly improved during the past year and its cost reduced anywhere from 30% to 50%. Already favorably known in the air-conditioning business for its high-class performance, the dehumidifier, now more efficient and lower in cost than ever before, should have a correspondingly broader market. The modern dehumidifier with its cooling system can be used in many sections of our country to provide complete air-conditioning service of the highest order. Wherever refrigeration is imperative the low cost of the new models widens the market for split air-conditioning systems.

Tool No. 3—The Absorption Refrigeration Machine. There is one well designed machine now on the market and one or two others are expected to be put on commercial production some time this year. Here is a brand new tool, one that can do everything that the conventional electric unit does and more too, for here is the first machine to provide year-round air-conditioning.

Examine this array of tools critically and you will find that it constitutes a matched set of fine instruments. Each instrument has its own peculiar advantages and is unexcelled in certain fields of application. Collectively, these tools cover practically all requirements of air-conditioning, so that wherever natural gas is sold gas-operated air-conditioning equipment should forge to the front. There is

high-grade, economical equipment for big installations, little installations, and for the most exacting specifications.

Let us not lose sight, however, of this one very important fact:—that while gas equipment is being perfected the manufacturers of electrical equipment are not standing still. Progress is being made on all fronts. Competition is extremely keen, and for some time gas is going to have to work very hard for every bit of air-conditioning business that it gets.

Practically all the equipment that the gas industry has been waiting for is now available and on the market. Since this is so, I believe that you will all agree that the time has come for the gas industry, especially those companies serving natural gas, to take an active part in the development of the air-conditioning business. A few companies already have crossed this Rubicon; but as yet there has been no united action.

Gas Company Program

Some companies are asking what should be done. Undoubtedly one of the first steps should be to air-condition gas company offices, as has been recommended by several of the A. G. A. committees. By so doing you not only make your customers comfortable, but give a practical demonstration of the value of true air-conditioning. I am glad to say that several of our progressive gas companies have already taken this step.

Another step that I believe all the larger companies should take is to establish an Air-Conditioning Department headed by a trained engineer. Regardless of the company's policies on appliance sales, this proposed department is needed to advise prospective buyers of air-conditioning systems and to see that gas equipment receives fair treatment in the various set-ups as submitted by local architects and contractors.

Possibly the greatest handicap that gas equipment
2527 has to face today is its lack of publicity and merchandising outlets. Local architects and contracting firms are, of course, much more familiar with conventional electric systems than with the newer gas units and need to be brought up to date and kept informed about the advantages of air-conditioning with gas. Here is one place where the gas company representative can do much pioneer and constructive work. In addition, I think that gas companies should make sizeable appropriations for advertising gas-

operated air-conditioning equipment, so that as public interest in air-conditioning is aroused there will be general recognition of the fact that gas is just as efficient for summer cooling as for winter heating.

Competitive Factors

If you should ask me when is the big market for air-conditioning going to open up, I should have to answer frankly that I don't know. In so far as the gas industry is concerned, it is my opinion that there are three main factors to be considered in any attempt to answer this question. The first is, Competitive Position of Available Equipment. Efficient, low cost and economical equipment is a prime requisite for new business. Since the above descriptive terms are used in their relative sense, we can say that factor No. 1 is at the present time favorable to a rapidly expanding business.

Factor No. 2 is concerned with merchandising methods and sales policy. Obviously, equipment manufacturers need the full co-operation of the gas industry. The need for an intensive and progressive sales campaign by gas companies and equipment manufacturers is urgent. The answer to factor No. 2 is largely in our own hands.

Factor No. 3 is concerned with the improvement in business conditions, which we are all hoping for. The new industry, air-conditioning, cannot by itself perform the impossible and correct all our economic ills, but by giving employment and by establishing higher living standards it can help business. Improved business will in turn stimulate the use of air-conditioning, and then, when good times return, if we have done our part, the summer demands for gas should grow by leaps and bounds.

2528 EXHIBIT NO. 178.

The Natural Gas Industry Provides Opportunities for Investment

By James S. Carroll

Statistician, Rauscher-Pierce & Company*

If any one industry of today were to be selected as one in which to confine the investment of funds, I would nominate the natural gas industry. This industry not only has

* Reprinted from The Southwestern Banker, November, 1938.

had a very remarkable past, but has an extremely brilliant future.

Today approximately 1,500 gas companies in the United States supply gas to more than 8,000 cities, towns and villages having a total population in excess of 80,000,000—nearly two-thirds of the entire population of the United States. In 1937 the natural gas industry received from its 7,038,000 customers the sum of $441,232,000 for the almost incomprehensible figure of 1,314,493,000,000 cu. ft. of gas. To reach these customers with natural gas service required 179,670 miles of transmission and distribution lines. At the present there are 24 states in which natural gas is being produced and marketed in commercial quantities. These figures give a brief picture of the enormous size to which the natural gas industry has grown in its comparatively few years as a servant to mankind.

Industry's Enviable Record

The major portion of the growth of this industry has taken place during the past 10 to 15 years, during almost half of which period this country was experiencing one of the most serious business recessions in its history. That its growth and development took place despite these obstacles gives the industry an enviable record. Most business barometers of today indicate that business activity is below the level of 1926 (the year generally selected by statistical companies to indicate a normal year), and far below the peak reached in 1929. However, in 1937 sales for the natural gas industry not only were far in excess of those for 1926, but also had registered a 35 per cent increase over sales for 1929. At the close of 1937 the industry had about 20 per cent more customers than it had in 1929. Its actual history during the depression also affords an interesting study. Revenues for the industry registered their lowest figure in 1933, in which year they showed only a 13 per cent decrease from the 1929 level. However, in no year did the total number of active customers decrease below the level of 1929. Even in 1932, in which year the total number of active cutomers was at its lowest, this business still maintained a four per cent customer increase over 1929. Contrast these figures with the Standard Statistical Index of Industrial Activity, which figure dropped from around 108 in 1929 to about 54

in 1932—half its previous level. In other words, the natural gas industry not only showed considerably more progress than business generally during the period preceding and through 1929, but indicated a great deal more stability during the 1929-32 decline. After 1932, the industry immediately soared to new records.

There are several definite reasons for this phenomenal growth in the utility field. First and foremost, natural gas is cheap. Per B.t.u. of heat, it is cheaper than either manufactured gas, coal, or fuel oil. But even on an equal price basis, it is more economical for industries in that it requires no storage place which demands a tie-up of capital in fuel inventories. It is more easily handled than coal or oil. Since it requires practically no labor for handling, industries have turned to it in a time of mounting labor costs. Also, it is a much cleaner fuel and more efficient in that it leaves no residue and gives an even and easily controlled heat.

Looking at the industry from an investment standpoint, it has many exceptional features. A natural gas company requires only a small amount of labor, which is a particularly important item during inflationary times or business booms. For instance, where there is approximately one employee for every $3,000 invested in plant and machinery in the automobile industry and one employee for each $7000 investment in the steel business, there is one employee for each $37,000 investment in the gas industry. Consequently, labor problems as well as increasing labor costs are eliminated to a great extent. In addition, natural gas companies are not burdened with the problem of inventories. Inventory losses have had serious effects on many industries during business declines, and for this reason usually necessitate a large working capital position. Another safety factor of the natural gas business is that a municipality must have access to a proven and convenient gas field before it can begin any competitive efforts. In fact, to my knowledge, there has never been any actual instance where a municipality installed a competing natural gas system.

Prospects for Expansion.

Prospects for the continued expansion of the industry, both internally and externally, are highly favorable. The American Gas Association, Inc., estimates that there is a market for over 700,000 house-heating customers in the territory now served by natural gas, after making reasonable allowance for mild climate, low buying power, and other factors; also, a market for 625,000 gas refrigerators, after making allowance for buying power and present saturation of automatic refrigerators. With transmission lines 1,200 miles long having already been
2529 profitably constructed, the industry should have further growth into fields now served by manufactured gas and other fuels. Natural gas adds to the general welfare by supplanting higher cost and dirtier fuels and for this reason alone an expanding market appears to be inevitable. Also, the industry has perfected a gas light which in the future may prove to be a commercial attraction. In addition, the definite success of gas refrigerators indicates further use of this fuel in the air-conditioning industry.

The majority of natural gas companies have held their funded debt to conservative figures and have provided for large sinking funds. For this reason these securities have maintained a good record. This record is somewhat illustrated in the October, 1938, issue of the Natural Gas Industry, published by the American Gas Association, Inc. The association has compiled a detailed operating statement for the entire industry for each of the past seven years. This statement shows that in no year did the industry as a whole fail to earn its interest and amortization charges, after providing for depreciation, less than 1.43 times (in 1933), while the average for this seven-year period was a coverage of over twice. The average interest coverage for 1937 for the industry was 2.80 times. In a recent bulletin published by Standard Bond Investments there is a list of 342 defaulted bonds, which list includes all domestic corporate bonds carried in the service which are currently in default of either interest or principal. There are only two natural gas company bonds on this list, and one of these defaulted prior to the company's changing from manufactured to natural gas.

Undoubtedly, the natural gas industry has proved that

it possesses a remarkable stability as well as tremendous future possibilities, and for this reason provides the investor with many attractive investment opportunities.

2530 EXHIBIT NO. 179.

Annual Statistics of
the Natural Gas Industry
in 1938

(Cut)

American Gas Association
Statistical Bulletin No. 37
October, 1939

Paul Ryan, Chief Statistician
American Gas Association
420 Lexington Avenue New York City

2531 Foreword

The data shown in this bulletin present revised figures on the natural gas industry for the years 1929 to 1938, since companies formerly distributing manufactured gas but which were distributing natural gas at the beginning of 1938 have been included in the tabulation for all ten years. The tables therefore present a comparable and consistent picture of the operations of an identical group of companies over the ten year interval, and eliminate fictitious and misleading changes in customers, sales and revenues, etc., resulting from arbitrary reclassification of companies as natural gas or manufactured gas distributors in any particular year.

It should be noted that the line charts shown on top of pages 7, 9 and 11 are plotted on the logarithmic or ratio scale, and the charts therefore indicate percentage increase, facilitating direct comparisons between the slope of one curve and that of any other curve regardless of its location on the diagram. Such a chart compares percentage changes, while the arithmetic chart compares absolute changes.

Figures in these tables do not include natural gas used in field operations and in the manufacture of carbon black, or gas used by distributing companies in the conduct of their gas operations.

Companies selling mixed manufactured and natural gas are not included in these data.

2535 NATURAL GAS INDUSTRY IN THE UNITED STATES

COMPARATIVE DATA ON THE NATURAL GAS INDUSTRY

1937 - 1938

Annual Gas Sales Per Customer (Cubic Feet)

	1938	1937	Change	Per Cent Change
Domestic*	53,000	55,200	- 2,200	- 4.0
Commercial	192,700	204,400	- 11,700	- 5.7
Industrial & Elec. Gen.	18,081,800	21,294,900	-3,213,100	-15.1
Total	167,800	186,100	- 18,300	- 9.8

Annual Revenue Per Customer

	1938	1937	Change	Per Cent Change
Domestic*	$ 36.41	$ 38.06	-$ 1.65	- 4.3
Commercial	90.15	96.32	- 6.17	- 6.4
Industrial & Elec. Gen.	3,016.24	3,664.78	- 648.54	-17.7
Total	$ 57.61	$ 62.75	-$ 5.14	- 8.2

Miscellaneous Data

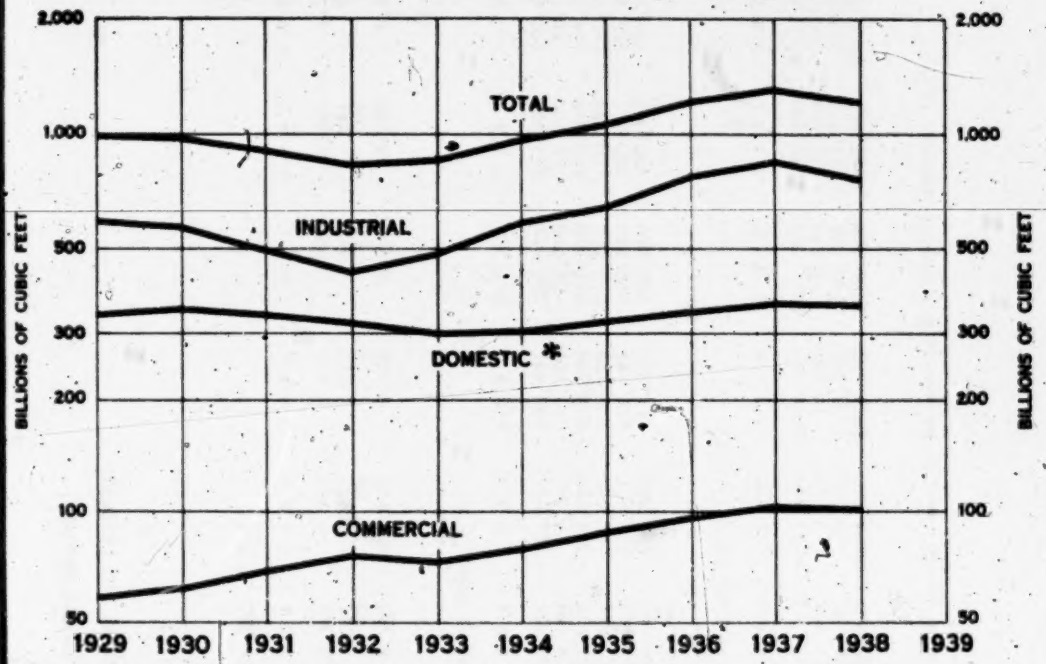
	1938	1937	Change	Per Cent Change
Population Served	33,785,000	33,127,000	+ 658,000	+ 2.0
Miles of Main	186,900	183,400	+ 3,500	+ 1.9
Employees	64,000	66,300	- 2,300	- 3.5

* Domestic Includes House Heating

TABLE 2

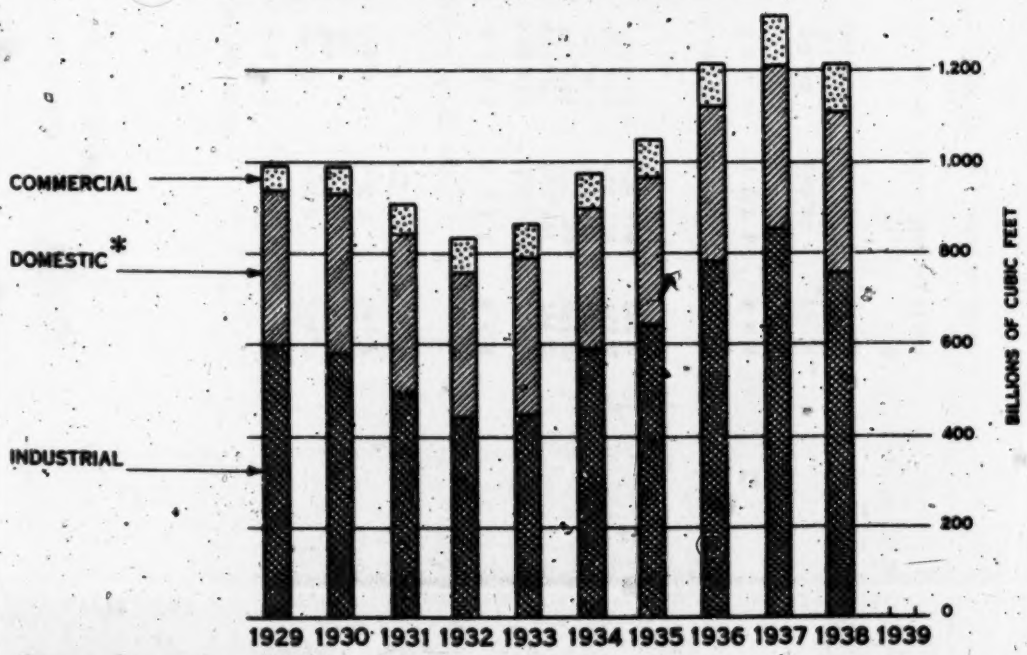
2536

GAS SALES - NATURAL GAS INDUSTRY



* Domestic Includes House Heating

GAS SALES - NATURAL GAS INDUSTRY



* Domestic Includes House Heating

2537

NATURAL GAS INDUSTRY IN THE UNITED STATES

COMPARATIVE DATA ON CUSTOMERS, SALES AND REVENUE

1929 - 1938

Thousands of Gas Customers at End of Year

	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
Domestic*	6,665	6,521	6,292	6,104	5,911	5,716	5,671	5,777	5,840	5,540
Commercial	524	505	488	468	447	433	430	419	361	334
Industrial	42	40	37	33	33	28	27	27	22	22
Total	7,231	7,066	6,817	6,605	6,391	6,177	6,128	6,223	6,223	5,896

Gas Sales to Consumers (Millions of Cubic Feet)

	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
Domestic*	352,964	359,890	339,893	320,733	303,321	300,286	320,641	340,591	347,979	335,418
Commercial	100,951	103,220	96,759	88,115	79,153	73,781	77,100	68,783	61,702	58,641
Industrial	589,398	681,230	623,198	519,719	465,771	385,720	328,394	359,568	460,095	484,270
Electric Generation	170,039	170,567	156,080	125,239	127,896	102,601	107,875	139,328	120,290	112,707
Total Ind. & Elec.Gen.	*759,437*	*851,797*	*779,278*	*644,958*	*593,667*	*488,321*	*436,269*	*498,896*	*580,385*	*596,977*
Total	1,213,352	1,314,907	1,215,930	1,053,806	976,141	862,388	834,010	908,270	990,066	991,036

Revenue from Sales to Consumers (Thousands of Dollars)

	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
Domestic*	$242,658	$248,175	$237,210	$225,445	$213,619	$213,496	$228,063	$237,739	$237,485	$223,464
Commercial	47,240	48,642	46,463	42,314	38,376	37,165	38,995	33,899	33,994	32,579
Industrial & Elec.Gen.	126,682	146,591	128,771	108,629	95,072	79,228	75,593	90,608	114,378	120,207
Total	$416,580	$443,408	$412,444	$376,388	$347,067	$329,889	$342,651	$366,246	$385,857	$376,250

* Domestic Includes House Heating.

Note: These figures do not include natural gas used in field operations and in the manufacture of carbon black, or gas used by distributing companies in the conduct of their gas operations.

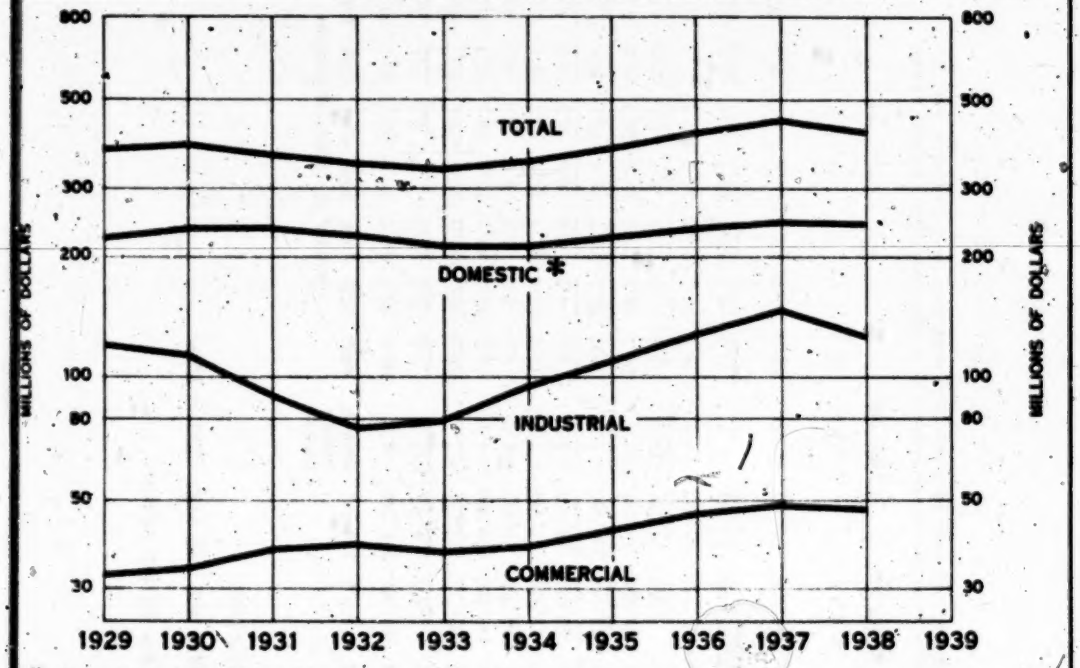
Companies selling mixed manufactured and natural gas are not included in these data.

3502

TABLE 3

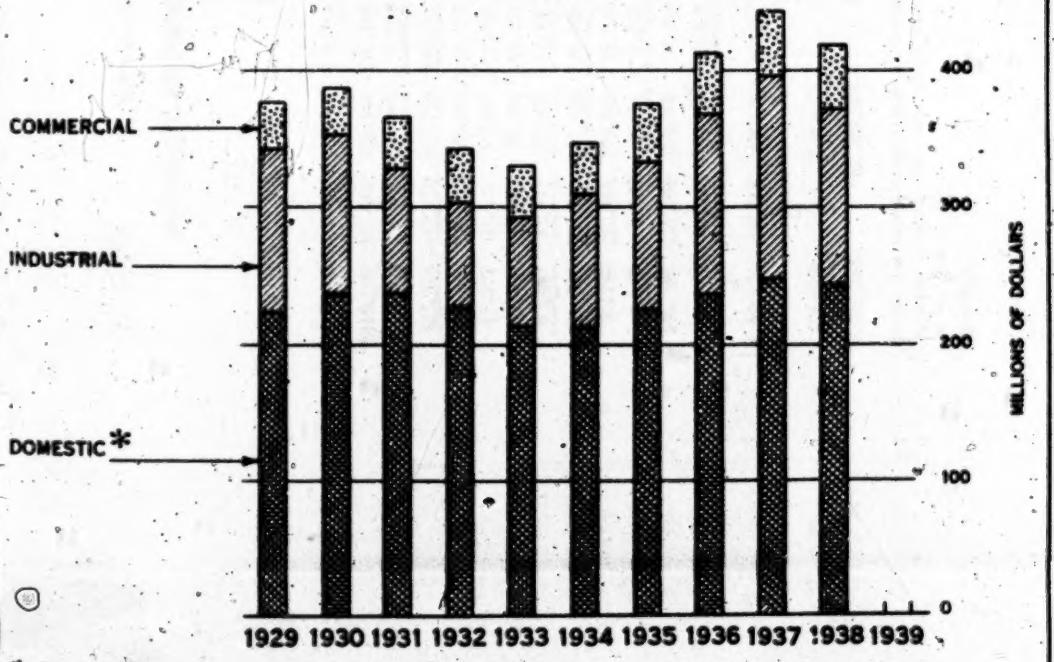
2538

GAS REVENUE - NATURAL GAS INDUSTRY



* Domestic Includes House Heating

GAS REVENUE - NATURAL GAS INDUSTRY



* Domestic Includes House Heating

NATURAL GAS INDUSTRY IN THE UNITED STATES*

COMPARATIVE ESTIMATED INCOME STATEMENT FOR THE YEAR 1931 - 1938

(Thousands of Dollars)

	1938	1937	1936	1935	1934	1933	1932	1931	Percent Change 1938-37	Percent of Operating Revenue 1938	1937	1936	1935	1934	1933	1932	1931
Revenue from Gas Sales to Consumers	$416,580	443,408	412,444	376,388	347,067	329,889	342,651	366,246	- 6.1	98.4	98.7	99.0	99.0	99.2	99.2	99.4	98.9
Miscellaneous Operating Revenue	6,749	5,651	4,289	3,726	2,646	2,705	2,056	4,065	+19.9	1.6	1.3	1.0	1.0	0.8	0.8	0.6	1.1
Total Operating Revenue	423,329	449,059	416,733	380,114	349,913	332,594	344,707	370,311	- 5.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Operating Expense**	216,236	225,417	205,033	195,759	191,753	185,256	182,350	199,968	- 4.1	51.1	50.2	49.2	51.5	54.8	55.7	52.9	54.0
Maintenance	17,272	16,614	17,505	15,205	13,297	12,971	13,788	15,553	+ 4.0	4.1	3.7	4.2	4.0	3.8	3.9	4.0	4.2
Retirement, Deple., Depre. Exp.	51,985	53,885	47,090	43,712	42,339	39,911	41,365	40,734	- 3.5	12.3	12.0	11.3	11.5	12.1	12.0	12.0	11.0
Taxes Accrued	40,047	41,312	37,506	31,930	31,142	29,268	30,679	29,995	- 3.1	9.4	9.2	9.0	8.4	8.9	8.8	8.9	8.1
Total Revenue Deductions	325,540	337,226	307,132	286,606	278,531	267,406	268,182	286,250	- 3.5	76.9	75.1	73.7	75.4	79.6	80.4	77.8	77.3
Utility Operating Income	97,789	111,811	109,601	93,508	71,382	65,188	76,525	84,061	-12.5	23.1	24.9	26.3	24.6	20.4	19.6	22.2	22.7
Non-Operating Income	4,149	5,388	5,001	5,702	5,599	5,322	5,860	7,776	-23.0	1.0	1.2	1.2	1.5	1.6	1.6	1.7	2.1
Gross Corporate Income	101,938	117,199	114,602	99,210	76,981	70,510	82,385	91,837	-13.0	24.1	26.1	27.5	26.1	22.0	21.2	23.9	24.8
Interest & Other Deductions	39,539	42,210	45,424	42,953	45,489	43,570	38,262	40,734	- 6.3	9.3	9.4	10.9	11.3	13.0	13.1	11.1	11.0
Net Income Available for Dividends and Surplus	$ 62,399	74,989	69,178	56,257	31,492	26,940	44,123	51,103	-16.8	14.8	16.7	16.6	14.8	9.0	8.1	12.8	13.8

	1938	1937	1936	1935	1934
Utility Plant (000 omitted)	$2,441,840	$2,414,484	$2,369,490	$2,345,384	$2,330,984

* Companies formerly distributing manufactured gas but which were distributing natural gas at the beginning of 1938 have been included in the above tabulation for all eight years. The data shown above for 1931 to 1938 are therefore not comparable with data on the natural gas industry previously issued for those years.

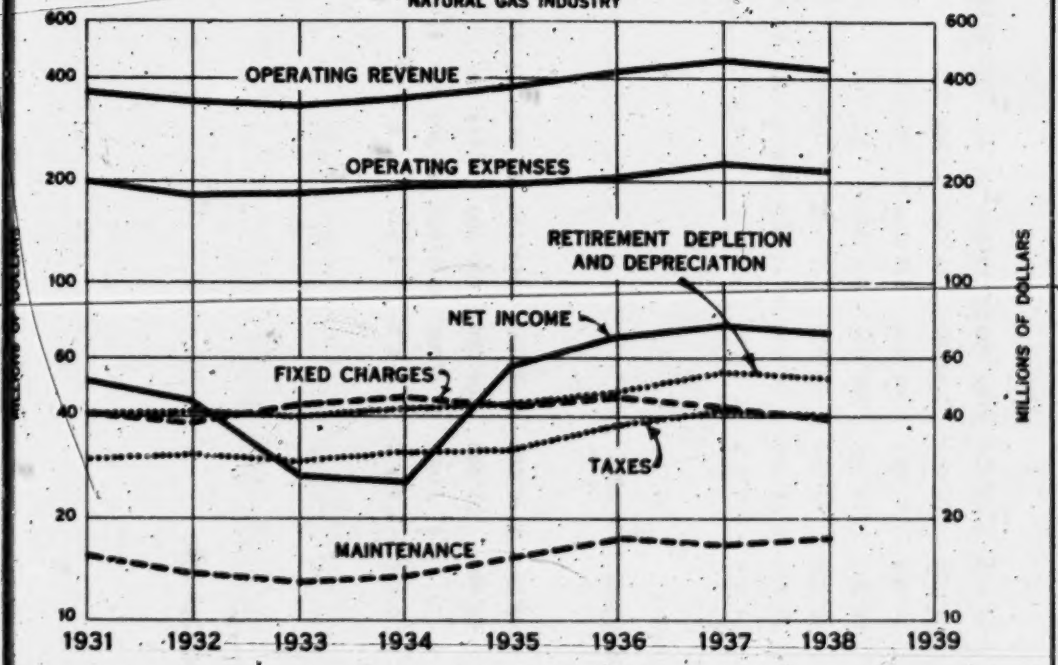
** Includes leased property rents.

TABLE 4

2540

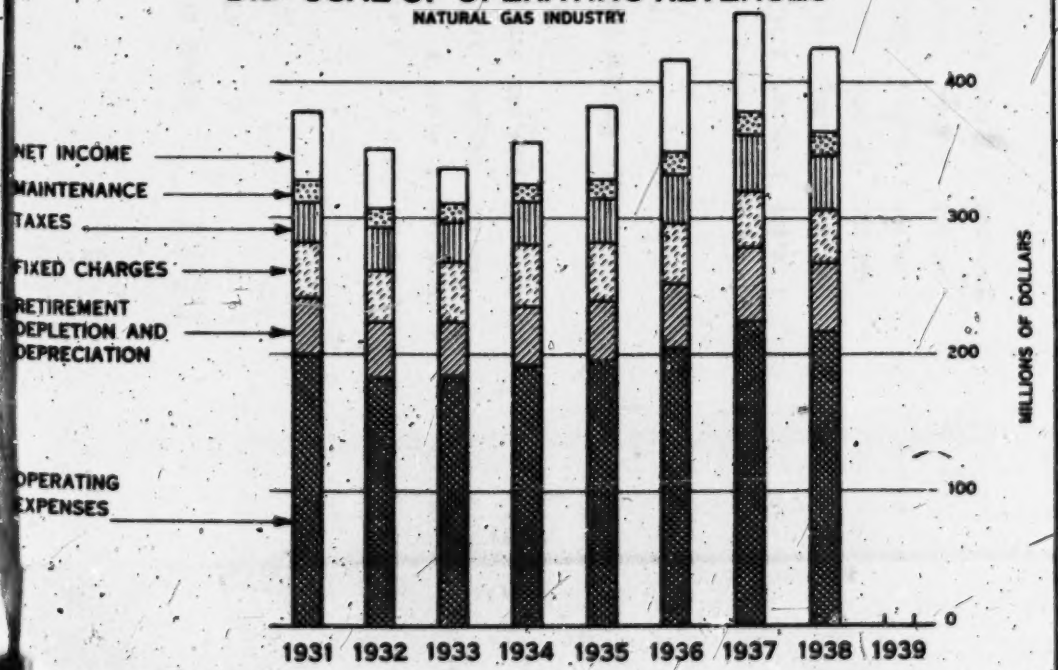
DISPOSAL OF OPERATING REVENUES

NATURAL GAS INDUSTRY



DISPOSAL OF OPERATING REVENUES

NATURAL GAS INDUSTRY



PUBLIC UTILITY FINANCING 1929-1938

(Thousands of Dollars)

(New Issues)

	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
Capital Stock	$ 5,000	$ 6,000	$ 5,000	$ 2,000	$ 0	$ 7,000	$ 6,000	$253,000	$ 762,000	$1,229,000
Bonds and Notes	266,000	148,000	119,000	82,000	49,000	27,000	268,000	696,000	1,603,000	703,000
Total	$271,000	$154,000	$124,000	$ 84,000	$ 49,000	$ 34,000	$274,000	$949,000	$2,365,000	$1,932,000

PUBLIC UTILITY CONSTRUCTION EXPENDITURES 1929-1938

(Thousands of Dollars)

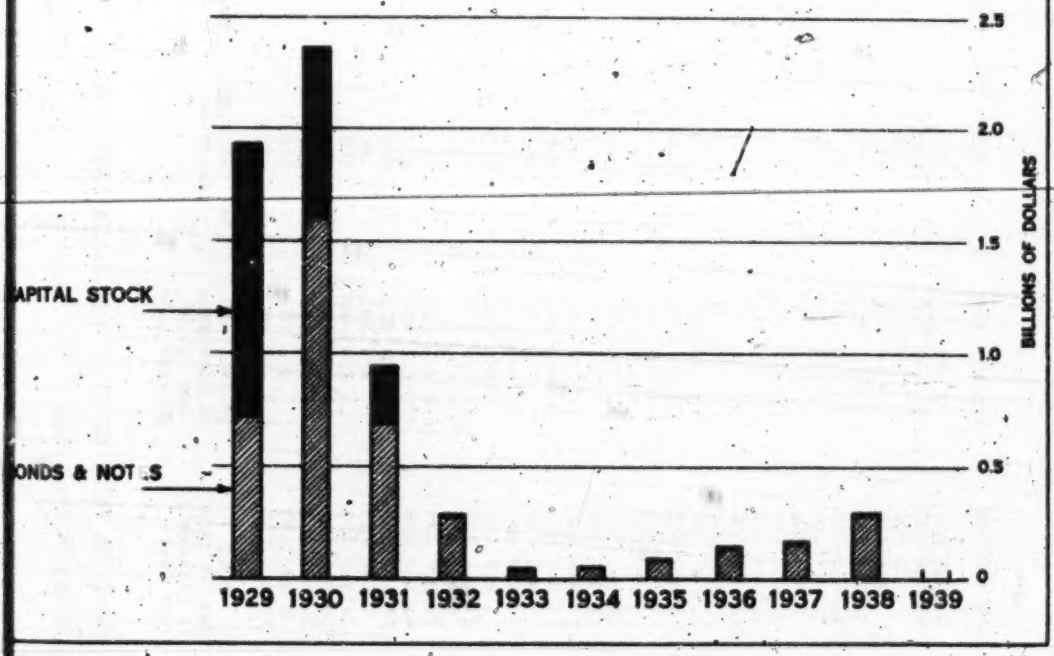
	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
Manufactured Gas	$ 28,000	$ 36,000	$ 26,000	$ 28,000	$ 25,000	$ 21,000	$ 46,000	$ 72,000	$ 96,000	$ 113,000
Natural Gas	51,000	61,000	64,000	32,000	28,000	23,000	38,000	73,000	125,000	119,000
Electric Light & Power	482,000	455,000	290,000	193,000	148,000	129,000	285,000	596,000	919,000	853,000
Electric Railway	83,000	101,000	109,000	117,000	78,000	46,000	61,000	132,000	125,000	135,000
Telephone (Bell System)	297,000	324,000	244,000	185,000	174,000	163,000	239,000	391,000	585,000	588,000
Total	$941,000	$977,000	$733,000	$555,000	$453,000	$382,000	$669,000	$1,264,000	$1,850,000	$1,808,000

TABLE 5

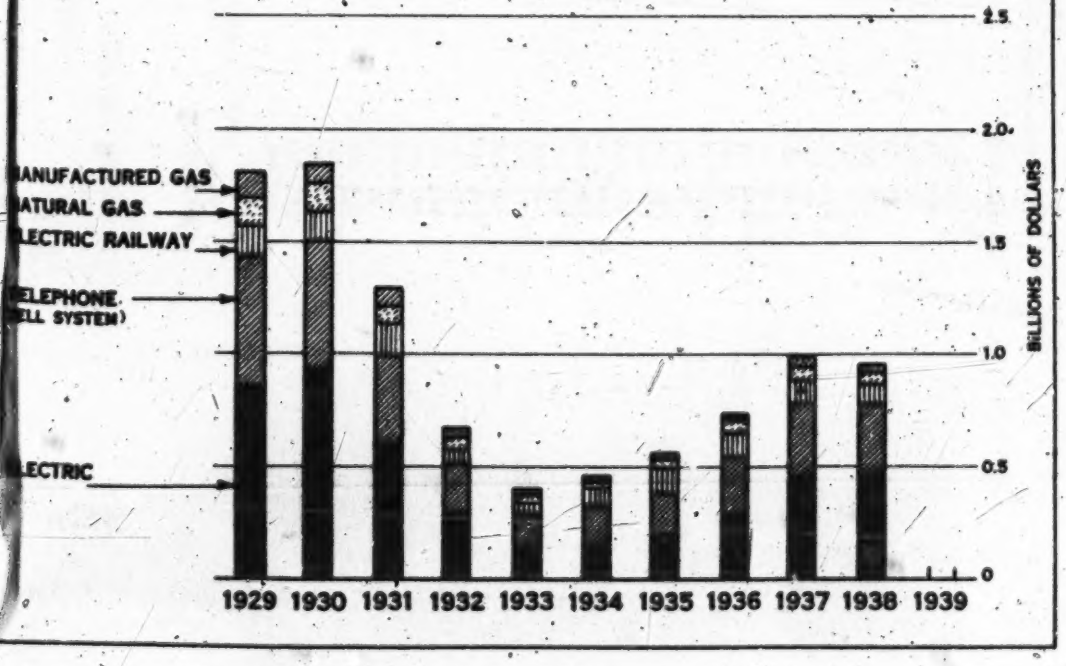
2542

PUBLIC UTILITY FINANCING

NEW ISSUES



PUBLIC UTILITY CONSTRUCTION



NATURAL GAS INDUSTRY IN THE UNITED STATES

POPULATION SERVED, CUSTOMERS, SALES, REVENUE, EMPLOYEES AND MILES OF MAIN BY STATES 1938

STATE	Population Served Dec. 31, 1938	Total Customers Dec. 31, 1938	Gas Sales to Consumers During 1938 MCF*	Revenue from Gas Sales to Consumers During 1938*	Employees Dec. 31, 1938	Miles Of Main Dec. 31, 1938
Alabama	306,000	31,260	13,413,100	$ 3,501,300	580	1,130
Arizona	145,500	28,940	4,396,700	1,952,600	290	450
Arkansas	415,000	78,480	25,239,600	6,069,700	590	3,340
California	5,833,500	1,656,870	178,507,900	79,707,300	12,110	23,380
Colorado	560,900	103,020	18,796,400	6,697,100	740	2,090
Florida	31,500	3,930	1,086,100	315,700	90	70
Georgia	734,900	82,730	14,751,300	5,797,000	810	1,400
Illinois	441,000	94,680	47,265,400	10,412,400	950	1,770
Indiana	297,900	51,000	15,032,100	4,847,200	320	1,640
Iowa	427,100	86,780	18,967,000	6,198,100	640	2,250
Kansas	1,175,700	230,840	64,311,400	17,255,700	2,350	10,820
Kentucky	951,500	180,180	12,464,700	6,637,000	1,490	3,090
Louisiana	1,017,000	189,540	106,433,900	17,949,200	1,690	3,220
Maryland	69,000	15,330	842,100	523,600	(a)	(a)
Michigan	1,979,300	480,410	19,245,000	20,099,800	2,990	3,770
Minnesota	108,400	10,740	10,278,900	2,385,900	40	570
Mississippi	388,900	49,150	13,338,800	3,711,300	520	1,430
Missouri	874,900	169,770	36,241,200	12,574,300	1,140	5,180
Montana	194,600	42,060	17,222,200	4,798,000	600	1,530
Nebraska	597,500	67,470	14,160,900	5,186,700	880	2,310
New Merico	88,300	21,150	6,835,000	2,072,000	200	930
New York	1,709,300	336,080	37,461,700	18,269,900	940	2,990
North Dakota	36,000	6,110	1,532,500	606,700	60	430
Ohio	5,045,100	1,279,560	113,895,000	55,387,100	12,870	39,850
Oklahoma	1,289,100	274,190	63,269,000	15,318,100	2,020	10,430
Pennsylvania	4,290,000	688,610	86,389,100	37,564,600	6,010	20,510
South Dakota	66,100	16,130	5,554,800	1,827,100	120	240
Tennessee	307,200	4[illegible],060	9,011,700	3,552,900	440	990
Texas	3,191,800	660,020	197,723,900	48,421,900	9,480	29,520
Utah	240,300	26,360	12,089,100	2,691,000	10	950
Virginia	46,100	7,190	426,200	404,800	(a)	(a)
Washington	10,000	710	77,200	40,500	10	110
West Virginia	808,400	191,370	36,126,400	11,239,100	2,690	8,930
Wyoming	106,800	23,840	10,905,600	2,564,300	320	1,530
TOTAL	33,784,600	7,230,560	1,213,351,900	416,579,900	63,990	186,850

Notes: * Includes gas used in electric power plants. (a) Included in Ohio.

TABLE 6

NATURAL GAS INDUSTRY IN THE UNITED STATES

POPULATION SERVED, CUSTOMERS, SALES, REVENUE, EMPLOYEES AND MILES OF MAIN BY STATES 1937

STATE	Population Served Dec. 31, 1937	Total Customers Dec. 31, 1937	Gas Sales to Consumers During 1937 MCF*	Revenue from Gas Sales to Consumers During 1937*	Employees Dec. 31, 1937	Miles of Main Dec. 31, 1937
Alabama	305,100	29,800	16,372,100	$ 4,062,900	680	1,110
Arizona	133,300	26,610	2,100,700	1,703,800	330	420
Arkansas	412,700	75,580	28,492,700	6,836,400	540	3,330
California	5,364,100	1,604,010	185,373,400	81,287,300	12,010	22,840
Colorado	559,500	100,430	20,258,500	6,663,800	830	2,050
Florida	31,500	3,800	1,081,700	316,000	90	70
Georgia	709,300	79,920	13,862,900	5,540,500	850	1,360
Illinois	434,000	92,520	54,603,500	11,671,100	970	1,770
Indiana	297,200	48,800	9,018,000	3,909,100	380	1,600
Iowa	427,000	84,000	18,846,600	6,285,200	650	2,220
Kansas	1,165,000	222,570	72,626,500	18,374,400	2,310	10,700
Kentucky	921,500	176,820	13,073,700	6,815,600	1,370	3,060
Louisiana	1,013,600	180,150	116,657,000	18,950,700	1,700	3,170
Maryland	63,000	15,080	686,600	497,100	(a)	(a)
Michigan	1,971,200	475,790	19,556,800	20,094,600	3,160	3,620
Minnesota	106,400	14,200	8,973,800	2,118,600	30	490
Mississippi	385,000	45,860	14,009,200	3,866,900	490	1,390
Missouri	860,000	165,300	39,980,500	13,605,600	1,500	5,080
Montana	194,400	39,430	20,068,500	5,182,100	660	1,500
Nebraska	592,000	65,120	14,651,500	5,289,000	840	2,260
New Mexico	86,000	18,910	5,747,400	1,795,400	130	900
New York	1,709,000	331,800	40,017,700	18,665,100	970	2,970
North Dakota	36,000	5,900	1,640,300	633,100	70	420
Ohio	5,044,300	1,271,230	129,793,100	63,932,300	13,340	39,440
Oklahoma	1,245,000	265,810	78,802,000	16,835,400	2,280	10,100
Pennsylvania	4,290,000	679,660	108,102,400	44,283,700	5,980	20,390
South Dakota	66,100	15,680	5,800,800	1,899,400	120	220
Tennessee	307,200	45,310	8,526,100	3,500,200	460	980
Texas	3,193,400	642,290	199,937,800	50,567,600	10,080	28,600
Utah	240,300	25,330	12,819,400	2,615,700	10	910
Virginia	45,000	6,580	398,200	373,300	(a)	(a)
Washington	10,000	1,130	208,000	16,600	10	110
West Virginia	803,000	187,630	42,491,700	12,759,300	3,130	8,900
Wyoming	105,700	22,890	10,327,400	2,460,500	340	1,440
TOTAL	33,126,800	7,065,940	1,314,906,500	$443,408,300	66,230	183,420

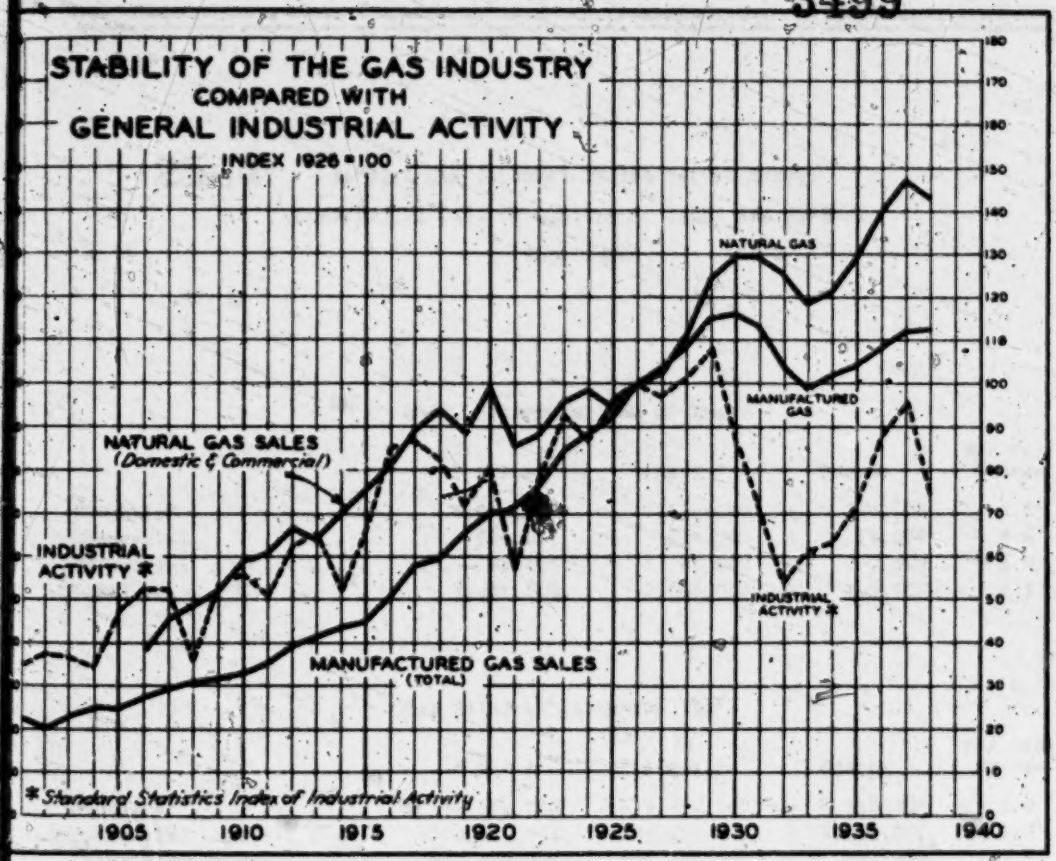
Notes: *Includes gas used in electric power plants. (a) Included in Ohio.

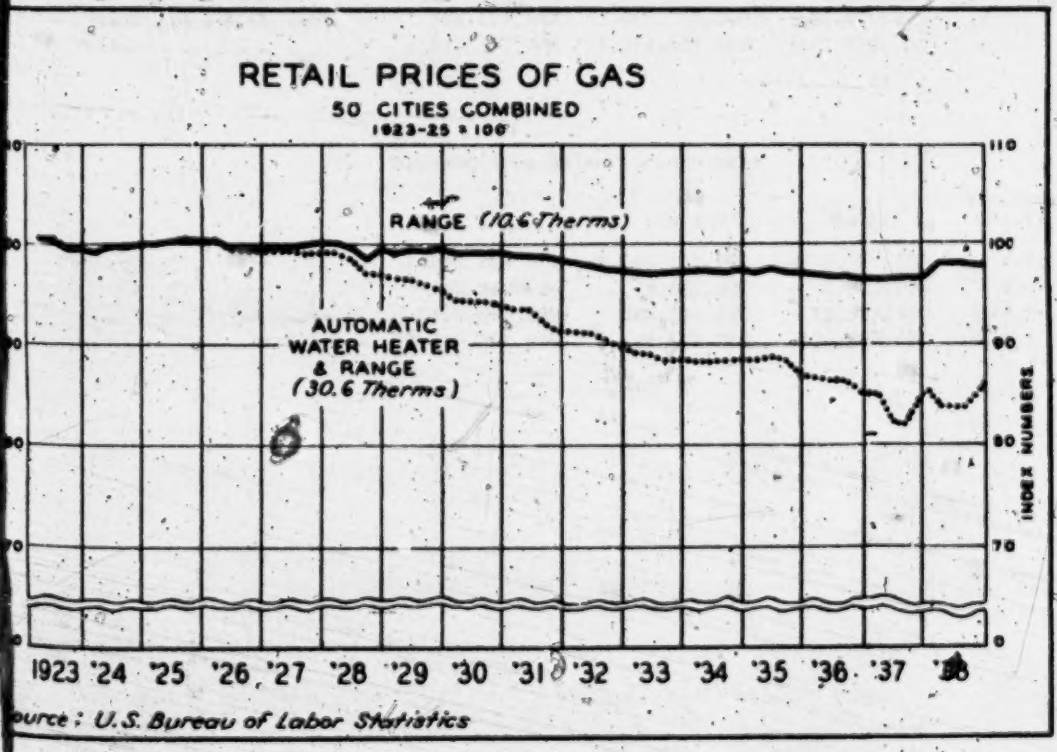
TABLE 7

2582

INDEX

Table		Page
1.	Data on Customers, Sales and Revenue (1937-1938)	5
2.	Unit Figures on Sales and Revenue Per Customer (1937-1938)	6
3.	Comparative Data on Customers, Sales and Revenue (1929-1938)	8
4.	Comparative Estimated Income Statement (1931-1938)	10
5.	Public Utility Financing and Construction Expenditures (1929-1938)	12
6.	Population Served, Customers, Sales, Revenue, Employees and Miles of Main in 1938 -by States	14
7.	Population Served, Customers, Sales, Revenue, Employees and Miles of Main in 1937 -by States	15


STABILITY OF THE GAS INDUSTRY
COMPARED WITH
GENERAL INDUSTRIAL ACTIVITY
INDEX 1926 = 100
NATURAL GAS
MANUFACTURED GAS
NATURAL GAS SALES
(Domestic & Commercial)
INDUSTRIAL ACTIVITY *
INDUSTRIAL ACTIVITY *
MANUFACTURED GAS SALES
(TOTAL)
* Standard Statistics Index of Industrial Activity
1905
1910
1915
1920
1925
1930
1935
1940


RETAIL PRICES OF GAS
50 CITIES COMBINED
1923-25 = 100
RANGE (10.6 Therms)
AUTOMATIC
WATER HEATER
& RANGE
(30.6 Therms)
INDEX NUMBERS
1923 '24 '25 '26 '27 '28 '29 '30 '31 '32 '33 '34 '35 '36 '37 '38
Source: U.S. Bureau of Labor Statistics

2534 NATURAL GAS INDUSTRY IN THE UNITED STATES

COMPARATIVE DATA ON CUSTOMERS, SALES AND REVENUE

1937- 1938

Gas Customers at End of Year

	1938	1937	Change	Per Cent Change
Domestic*	6,665,000	6,521,000	+ 144,000	+ 2.2
Commercial	524,000	505,000	+ 19,000	+ 3.8
Industrial	42,000	40,000	+ 2,000	+ 5.0
Total	7,231,000	7,066,000	+ 165,000	+ 2.3

Gas Sales to Consumers (MCF)

	1938	1937	Change	Per Cent Change
Domestic*	352,964,000	359,890,000	- 6,926,000	- 1.9
Commercial	100,951,000	103,220,000	- 2,269,000	- 2.2
Industrial	589,398,000	681,230,000	- 91,832,000	-13.5
Electric Generation	170,039,000	170,567,000	- 528,000	- 0.3
Total Ind. & Elec. Gen.	*759,437,000*	*851,797,000*	*- 92,360,000*	*-10.8*
Total	1,213,352,000	1,314,907,000	-101,555,000	- 7.7

Revenue from Sales to Consumers

	1938	1937	Change	Per Cent Change
Domestic*	$ 242,658,000	$ 248,175,000	-$ 5,517,000	- 2.2
Commercial	47,240,000	48,642,000	- 1,402,000	- 2.9
Industrial & Elec. Gen.	126,682,000	146,591,000	- 19,909,000	-13.6
Total	$ 416,580,000	$ 443,408,000	-$26,828,000	- 6.1

* Domestic Includes House Heating.

Note: These figures do not include natural gas used in field operations and in the manufacture of carbon black, or gas used by distributing companies in the conduct of their gas operations.

Companies selling mixed manufactured and natural gas are not included in these data.

TABLE 1

Exhibit 180

OPEN-MARKET RATES ON SHORT-TERM LOANS -- NEW YORK CITY

Year	Prime Commercial Paper, 4 to 6 months Range (1)	Prime Bankers' Acceptances, 90 days Range (1)	Time Loans, 90 Days* Range (1)	Average Rates on Call Loans** Renewal Rate Range (2)
	Per cent per annum			
1923	4-1/2 to 5-1/2	4 to 4-1/8	-	4.32 to 5.14
1924	3 to 4 3/4	2 to 4-1/8	-	2.00 to 4.39
1925	3-1/2 to 4-1/2	3 to 3-1/2	-	3.32 to 5.32
1926	4 to 4 3/4	3-1/8 to 3-7/8	4 to 5	3.81 to 5.16
1927	4 to 4-1/2	3-1/8 to 3-3/4	4 to 4-1/2	3.60 to 4.38
1928	4 to 5-1/2	3-3/8 to 4-1/2	4- /4 to 7-3/4	4.24 to 8.60
1929	5-1/2 to 6-1/4	3-3/4 to 5-1/2	4-3/4 to 9	4.43 to 9.23
1930	2-3/4 to 6	1-7/8 to 4	2 to 5	2.00 to 4.64
1931	2 to 4-1/8	7/8 to 3-1/4	1-1/4 to 4	1/+5 to 2.70
1932	1-1/4 to 4	3/8 to 3	1/2 to 4	1.00 to 2.65
1933	1-1/4 to 4-1/2	1/4 to 3-5/8	1/2 to 3-1/2	.75 to 3.32
1934	1/4 to 1-1/2	1/8 to 1/2	3/4 to 1-1/4	1.00 to 1.00
1935	3/4 to 1	1/8 to 1/8	1/4 to 1	.25 to 1.00
1936	1/2 to 3/4	1/8 to 3/16	1 to 1-1/4	.75 to 1.00
1937	3/4 to 1	3/16 to 9/16	1-1/4 to 1-1/4	1.00 to 1.00
1938	5/8 to 1	7/16 to 7/16	1-1/4 to 1-1/4	1.00 to 1.00
Jan. 1939	1/2 to 5/8	7/16	1-1/4	1.00
Feb.	1/2 to 5/8	7/16	1-1/4	1.00
Mar.	1/2 to 5/8	7/16	1-1/4	1.00
April	1/2 to 5/8	7/16	1-1/4	1.00
May	1/2 to 5/8	7/16	1-1/4	1.00
June	1/2 to 5/8	7/16	1-1/4	1.00
July	1/2 to 5/8	7/16	1-1/4	1.00
Aug.	1/2 to 5/8	7/16	1-1/4	1.00
[illegible]	3/4 to 3/4	[illegible] 7/16	[illegible] 1-1/4	[illegible] 1.00

* Stock Exchange 90-day time loans.
(1) Range of rates prevailing during the year (or month).
** Stock Exchange Call loans. Figures shown are based upon monthly averages of daily quotations.
(2) Annual Ranges shown for call loans are ranges of the twelve monthly averages.

Source: Annual Reports and Monthly Bulletins of Board of Governors of the Federal Reserve System.

INTEREST RATES CHARGED CUSTOMERS BY BANKS IN PRINCIPAL CITIES

Year	NEW YORK CITY Monthly Average High	Low	Annual Average	EIGHT OTHER NORTHERN AND EASTERN CITIES Monthly Average High	Low	Annual Average
1919	5 63%	5.36%	5.51%	5.86%	5.59%	5.73%
1920	6.71	5.93	6.25	7.01	5.99	6.74
1921	6.78	5.68	6.34	6.99	6.19	6.76
1922	5 50	4.66	5.07	6.08	5.12	5.48
1923	5.39	4 82	5.19	5.64	5.34	5.50
1924	5 21	4.09	4.60	5.53	4.80	5.11
1925	4.70	4.16	4.47	5.20	4.79	4.98
1926	4 85	4.38	4.67	5.17	4.87	5.06
1927	4.66	4.35	4.53	4.99	4.76	4.88
1928	5.63	4 44	5.15	5.91	4.73	5.34
1929	6.08	5.73	5.88	6.25	5.86	6.04
1930	5 64	4.16	4 69	5.88	4.66	5.07
1931	4 67	3 93	4 22	4.91	4.47	4.61
1932	4.72	4.12	4.49	5.14	4 88	5.05
1933	4 88	3 48	4 02	5.29	4.51	4.83
1934	3.58	3.18	3 33	4 65	3 98	4.29
1935	2 90	2.61	2.70	4 08	3.63	3.86
1936	2.64	2 40	2.49	3.63	3 45	3.52
1937	2 53	2 34	2 43	3.45	3.29	3.36
1938	2.40	2.16	2.33	3.47	3.25	3.32
Jan 1939	2.29			3 41		
Feb	2.24			3.33		

Note: Computed by the Board of Governor of the Federal Reserve System, and represent rates ch
own customers as distinguished from open market rates. All averages are based on rates
loans - commercial loans, and demand and time loans on securities. The method of computi
(a) the relative importance of each of these 3 types of loans and (b) the relative impor
measured by total loans. In the 2 group averages the average rate for each city include
portance of that city in the group, as measured by the loans of all banks.

The "high" shown for each year is the highest of the 12 monthly figures. The same expla

Source: Annual Reports and Monthly Bulletins of the Board of Governors of the Federal Reserve

INTEREST RATES CHARGED CUSTOMERS BY BANKS IN PRINCIPAL CITIES

NEW YORK CITY			EIGHT OTHER NORTHERN AND EASTERN CITIES			TWENTY-SEVEN SOUTHERN AND WESTERN CITIES		
Monthly Average			Monthly Average			Monthly Average		
High	Low	Annual Average	High	Low	Annual Average	High	Low	Annual Average
5.63%	5.36%	5.51%	5.86%	5.59%	5.73%	6.11%	5.93%	6.00%
6.71	5.93	6.25	7.01	5.99	6.74	7.08	6.16	6.75
6.78	5.68	6.34	6.99	6.19	6.76	7.13	6.67	6.99
5.50	4.66	5.07	6.08	5.12	5.48	6.[illegible]	5.[illegible]	6.14
5.39	4.82	5.19	5.64	5.34	5.50	5.99	5.83	5.94
5.21	4.09	4.60	5.53	4.80	5.11	6.02	5.47	5.71
4.70	4.16	4.47	5.20	4.79	4.98	5.61	5.53	5.58
4.85	4.38	4.67	5.17	4.87	5.06	5.68	5.54	5.61
4.66	4.35	4.53	4.99	4.76	4.88	5.72	5.52	5.60
5.63	4.44	5.15	5.91	4.73	5.34	5.91	5.53	5.70
6.08	5.73	5.88	6.25	5.86	6.04	6.29	5.94	6.14
5.64	4.16	4.69	5.88	4.66	5.07	6.12	5.43	5.72
4.67	3.93	4.22	4.91	4.47	4.61	5.56	5.28	5.39
4.72	4.12	4.49	5.14	4.88	5.05	5.68	5.55	5.62
4.38	3.48	4.02	5.29	4.51	4.83	5.68	5.42	5.56
3.58	3.18	3.33	4.65	3.98	4.29	5.40	4.92	5.17
2.90	2.61	2.70	4.08	3.63	3.86	4.95	4.51	4.69
2.64	2.40	2.49	3.63	3.45	3.52	4.51	4.14	4.35
2.53	2.34	2.43	3.45	3.29	3.36	4.21	4.15	4.17
2.40	2.16	2.33	3.47	3.25	3.32	4.16	4.04	4.11
2.29			3.41			4.10		
2.24			3.33			4.09		

uted by the Board of Governor of the Federal Reserve System, and represent rates charged by reporting banks to their customers as distinguished from open market rates. All averages are based on rates reported for 3 types of customer s - commercial loans, and demand and time loans on securities The method of computing the averages takes into account the relative importance of each of these 3 types of loans and (b) the relative importance of each reporting bank, as sured by total loans. In the 2 group averages the average rate for each city included is weighted according to the im- tance of that city in the group, as measured by the loans of all banks.

"high" shown for each year is the highest of the 12 monthly figures. The same explanation applies to the "low"

nnual Reports and Monthly Bulletins of the Board of Governors of the Federal Reserve System.

2549 **List of Cities Covered by the Data Shown on Page 2**

New York City

Eight Northern and Eastern Cities

Chicago
Boston
Philadelphia
Cleveland
Detroit
Pittsburgh
Buffalo
Cincinnati

Twenty-Seven Southern and Western Cities

San Francisco
Los Angeles
St. Louis
Baltimore
Minneapolis
New Orleans
Kansas City
Dallas
Houston
Seattle
Atlanta
Louisville
Richmond
Denver
Portland
Omaha
Jacksonville
Birmingham
Salt Lake City
Nashville
Oklahoma City
Spokane
Little Rock
El Paso
Helena
Charlotte
San Antonio

Exhibit No. 180.

2550

Discount Rates*
of the
New York and Chicago Federal Reserve Banks

1927-1939

New York Federal Reserve Bank		Chicago Federal Reserve Bank	
Effective Date of the New Rate	New Rate	Effective Date of the New Rate	New Rate
August 5, 1927	3½%		
		September 7, 1927	3½%
		January 25, 1928	4
February 3, 1928	4		
		April 20, 1928	4½
May 18, 1928	4½		
July 13, 1928	5	July 11, 1928	5
August 9, 1929	6		
November 1, 1929	5		
November 15, 1929	4½		
		November 23, 1929	4½
February 7, 1930	4	February 8, 1930	4
March 14, 1930	3½		
May 2, 1930	3		
June 20, 1930	2½	June 21, 1930	3½
December 24, 1930	2		
		January 10, 1931	3
May 8, 1931	1½	May 9, 1931	2½
October 9, 1931	2½		
October 16, 1931	3½	October 17, 1931	3½
February 26, 1932	3		
June 24, 1932	2½	June 25, 1932	2½
March 3, 1933	3½	March 4, 1933	3½
April 7, 1933	3		
May 26, 1933	2½	May 27, 1933	3
October 20, 1933	2	October 21, 1933	2½
February 2, 1934	1½		
August 27, 1937	1	January 19, 1935	2
		August 21, 1937	1½

The last rates shown were still in effect as of October 1, 1939.

Source: Annual Reports and Monthly Bulletins of Board of Governors of Federal Reserve System.

*Rates on rediscounts for and advances to member banks under sections 13 and 13a of the Federal Reserve Act except (1) those secured by direct and eligible guaranteed obligations of the United States and (2) advances to individuals secured by direct obligations of the United States.

2551 **Yields on Long-Term Federal and Municipal Bonds**

Year	U. S. Government(1)	Municipal(2) (15 Municipal Bonds)
1919	4.73%	4.46%
1920	5.32	4.98
1921	5.09	5.09
1922	4.30	4.23
1923	4.36	4.25
1924	4.06	4.20
1925	3.86	4.09
1926	3.68	4.09
1927	3.34	3.98
1928	3.33	4.05
1929	3.60	4.27
1930	3.29	4.07
1931	3.34	4.01
1932	3.68	4.65
1933	3.31	4.71
1934	3.12	4.03
1935	2.79	3.41
1936	2.65	3.07
1937	2.68	3.10
1938	2.56	2.91
Jan. 1939	2.47	2.70
Feb.	2.44	2.70
Mar.	2.34	2.67
Apr.	2.30	2.75
May	2.17	2.66
June	2.13	2.63
July	2.16	2.65
Aug.	2.21	2.75
Wk. ended 9/23/39	2.74	3.29

(1) Computed by Division of Research and Statistics of United States Treasury Department.
(2) Computed by Standard Statistics Company.
Source: Annual Reports and Monthly Bulletins of Board of Governors of Federal Reserve System.

10/20/39

2552

The Annalist Average of Yields On Ten High Grade Railroad Bonds* 1857-1939

Year	High	Low	Year	High	Low	Year	High	Low
1857	9.23%	7.58%	1890	4.96%	4.62%	1920	5.66%	5.12%
1858	8.18	7.11	1891	4.93	4.73	1921	5.46	4.81
1859	7.37	7.09	1892	4.69	4.59	1922	4.73	4.46
			1893	5.07	4.60	1923	4.82	4.62
1860	7.44	6.81	1894	4.68	4.53	1924	4.82	4.60
1861	7.49	7.10	1895	4.64	4.35	1925	4.66	4.55
1862	7.14	5.94	1896	4.75	4.44	1926	4.55	4.41
1863	6.03	5.44	1897	4.14	4.26	1927	4.37	4.11
1864	6.19	5.36	1898	4.40	4.09	1928	4.44	4.12
1865	7.41	6.40	1899	4.03	3.89	1929	4.61	4.42
1866	7.61	7.16						
1867	7.42	7.24	1900	4.01	3.86	1930	4.44	4.16
1868	7.44	7.17	1901	3.83	3.75	1931	5.21	4.15
1869	7.72	7.42	1902	3.85	3.72	1932	5.59	4.76
			1903	4.07	3.84	1933	5.17	4.46
1870	7.65	7.30	1904	3.99	3.85	1934	4.54	3.90
1871	7.42	7.25	1905	3.86	3.80	1935	3.80	3.71
1872	7.27	7.07	1906	4.00	3.85	1936	3.64	3.36
1873	7.50	7.06	1907	4.53	4.01	1937	3.74	3.38
1874	7.08	6.70	1908	4.27	4.02	1938	3.99	3.73
1875	6.63	6.30	1909	4.06	3.97			
1876	6.24	6.09					1939	
1877	6.26	6.11	1910	4.20	4.06			
1878	6.16	6.03	1911	4.13	4.07	Jan.	3.71	
1879	5.92	5.67	1912	4.08	4.02	Feb.	3.68	
			1913	4.22	4.03	Mar.	3.64	
1880	5.64	5.18	1914	4.23	4.01	April	3.74	
1881	5.22	5.04	1915	4.28	4.07	May	3.66	
1882	5.24	5.16	1916	4.12	4.04	June	3.61	
1883	5.21	5.07	1917	4.84	3.99	July	3.63	
1884	5.39	4.88	1918	5.06	4.57	Aug.	3.66	
1885	5.20	4.73	1919	5.14	4.84		4.04 wk. ended 9/23	
1886	4.67	4.47					3.86 wk. ended 10/14	
1887	4.78	4.56						
1888	4.63	4.50						
1889	4.53	4.26						

Source: The Annalist.

Note: For each of the years 1857 to 1938, inclusive, the high yield is the highest average monthly yield in the year; similarly, the low yield is the lowest average monthly yield in the year. For 1939, the average monthly yields are presented.

* In 1939 the number of bonds was reduced to seven.

10/20/39

2553

The Annalist Average Of Yields On Ten High Grade Public Utility Bonds 1929–1939

Year	High	Low
1929	4.82%	4.60%
1930	4.70	4.41
1931	4.75	4.24
1932	4.93	4.33
1933	4.58	4.26
1934	4.38	3.98
1935	3.93	3.65
1936	3.57	3.05
1937	3.36	3.06
1938	3.12	2.93
Jan. 1939	2.88%	
Feb.	2.86	
Mar.	2.86	
April	2.88	
May	2.83	
June	2.83	
July	2.85	
Aug.	2.85	
	3.26	9/23 wk. ended.
	3.10	10/14 wk. ended.

Source: The Annalist.

10/20/39

BOND YIELD AVERAGES - DOMESTIC CORPORATION BONDS
BY INDUSTRIAL GROUPS AND RATINGS
(COMPUTED BY STANDARD STATISTICS COMPANY, INC.)

Year	Public Utility						Railroad					
	Aa	A1	A	Baa	Ba1	B	Aa	A1	A	Baa	Ba1	B
Series begin with April 1924. No annual average is given for 1924.												
	%	%	%	%	%	%	%	%	%	%	%	%
1925	4.93	5.15	5.58	6.17	6.74	7.92	4.78	5.08	5.65	6.2[illegible]	[illegible]	7.51
1926	4.77	5.00	5.36	5.97	6.55	7.89	4.65	4.90	5.34	5.81	6.28	7.02
1927	4.63	4.87	5.18	5.67	6.18	6.72	4.48	4.70	5.03	5.43	5.76	6.38
1928	4.51	4.72	5.05	5.51	6.00	6.58	4.42	4.60	4.96	5.25	6.26	6.98
1929	4.73	4.94	5.26	5.88	6.49	7.19	4.74	4.91	5.30	5.74	6.45	7.61
1930	4.61	4.85	5.20	5.96	6.76	7.62	4.58	4.75	5.15	5.80	7.12	8.10
1931	4.36	4.65	5.24	6.06	7.57	9.00	4.49	4.85	5.71	6.72	7.60	9.46
1932	4.81	5.32	6.34	7.55	8.57	9.26	5.45	6.09	7.18	7.97	8.69	#
1933	4.47	5.07	5.93	7.51	8.68	9.42	4.63	5.42	6.83	7.13	8.83	8.38
1934	4.00	4.58	5.32	6.29	8.14	9.17	4.07	4.44	5.33	6.65	7.84	9.19
1935	3.43	3.93	4.56	5.07	6.45	7.25	3.54	3.94	4.97	6.77	8.39	9.14
1936	3.23	3.61	4.15	4.56	5.43	6.12	3.36	3.72	4.26	5.01	5.86	6.60
1937	3.12	3.51	4.20	4.87	5.78	7.13	3.45	3.74	4.28	5.31	6.50	7.31
1938	2.88	3.37	4.19	5.27	6.98	7.93	3.55	4.09	5.25	6.74	8.54	*
Jan. 1939	* 2.72	3.10	3.83	4.93	6.70	7.12	3.46	3.85	4.56	6.04	7.57	*
Feb.	2.66	3.03	3.77	4.91	6.21	7.04	3.42	3.74	4.59	6.03	7.54	*
Mar.	2.64	2.94	3.77	4.81	6.15	6.58	3.39	3.74	4.54	6.03	7.48	*
Apr.	2.60	2.91	3.73	4.67	5.90	6.43	3.40	3.66	4.53	5.85	7.20	*
May	2.58	2.87	3.66	4.69	6.15	6.74	3.40	3.59	4.66	6.29	7.83	*
June	2.55	2.84	3.67	4.57	6.03	6.47	3.35	3.55	4.75	6.17	8.40	*
July	2.54	2.79	3.61	4.49	5.83	6.27	3.34	3.46	4.62	6.08	7.99	*
Aug.	2.52	2.65	3.57	4.42	5.47	6.12	3.36	3.41	4.52	6.02	7.7[illegible]	*
Sept.	2.58	2.68	3.58	4.45	5.50	6.39	3.39	3.53	4.77	6.30	8.07	*
Oct.	3.17	3.31	4.02	4.70	5.78	6.61	3.62	3.92	4.88	6.17	7.37	*

10th Sept

No averages given for this group for 1932.
* Insufficient number of issues to give representative yield.

Source. Standard Statistics Company, Inc., Standard Trade and Securities, Vol. 3 Statistical Section.

An average based upon yield to maturity of all active bonds (about 4,000) listed in Standard Bond Investments. No unusual yields due to conversion privileges, redemption, early maturity or other special causes have been included in the averages. Based on prices as of about the 20th of the preceding month.

BOND YIELD AVERAGES -- DOMESTIC CORPORATION BONDS
BY INDUSTRIAL GROUPS AND RATINGS
(COMPUTED BY STANDARD STATISTICS COMPANY, INC.)

Railroad						Industrial					
A1+	A1	A	B1+	B1	B	A1+	A1	A	B1+	B1	B
en for 192											
%	%	%	%	%	%	%	%	%	%	%	%
4.78	5.08	5.65	6.2-	[illegible]	7.51	5.04	5.57	6.12	6.84	7.60	8.75
4.65	4.90	5.34	5.81	6.28	7.02	4.88	5.41	6.00	6.61	7.09	8.22
4.48	4.70	5.03	5.43	5.76	6.38	4.72	5.21	5.85	6.42	6.77	7.33
4.42	4.60	4.96	5.25	6.26	6.98	4.69	5.16	5.69	6.25	6.68	6.98
4.74	4.91	5.30	5.74	6.45	7.61	4.88	5.46	5.86	6.34	6.81	7.35
4.58	4.75	5.15	5.80	7.12	8.10	4.72	5.29	5.92	6.74	7.63	8.24
4.49	4.85	5.71	6.72	7.60	9.46	4.64	5.27	6.40	7.45	8.42	9.35
5.45	6.09	7.18	7.97	8.69	#	5.40	6 24	7.15	8.26	8.70	9.07
4.63	5.42	6.83	7.13	8.83	8.38	4.82	5.36	6.11	7.45	8.16	9.21
4.07	4.44	5.33	6.65	7.84	9.19	4.14	4.67	5.03	6.19	7.23	9.28
3.64	3.94	4.97	6.77	8.39	9.14	3.64	4.34	[illegible]65	5.34	6.44	8.11
3.36	3.72	4.26	5.01	5.86	6.60	3.32	3.84	4.27	4.77	5.82	6.86
3.45	3.74	4.28	5.31	6.50	7.31	3 33	3.91	4.30	4.78	5.47	•
3.55	4.09	5.25	6.74	8.54	•	3.14	3.59	4.18	5.30	6.00	•
3.46	3.85	4.56	6.04	7.57	•	2.85	3.10	3.91	4.72	5.57	•
3.42	3.74	4.59	6.03	7.54	•	2.79	3.11	3.85	4.69	5.50	•
3.39	3.74	4.54	6.03	7.48	•	2.75	3.07	3.84	4.57	5.52	•
3.40	3.66	4.53	5.85	7.20	•	2.82	3.14	3.84	4.49	5.31	•
3.40	3.59	4.66	6.29	7.83	•	2.75	3.02	3.88	4.60	5.52	•
3.35	3.55	4.75	6.17	8.40	•	2.74	3.00	3.84	4.56	5.62	•
3.34	3.46	4.62	6.08	7.99	•	2.68	2.90	3.79	4.22	5.45	•
3.36	3.41	4.52	6.02	7.76	•	2.71	2.75	3.79	4.20	5.35	•
3.39	3.53	4.77	6.30	8.07	•	2.63	2.90	3.70	4.29	5.46	•
3.62	3.92	4.88	6.17	7.37	•	3.07	3.15	4.01	4.41	5.22	•

yield.

e and Securities, Vol. 3 Statistical Section.

ds (about 4,000) listed in Standard Bond Investments.
n, early maturity or other special causes have been
e 20th of the preceding month.

2556 EXHIBIT NO. 181.

Table of Contents

Arkansas Louisiana Gas Company..... 1
Cities Service Gas Company..... 4
El Paso Natural Gas Company..... 5
Lone Star Gas Corporation and Lone Star Gas Company (A Subsidiary)..... 9
Mississippi River Fuel Corporation..... 13
Northern Natural Gas Company..... 14
Oklahoma Natural Gas Company..... 16
Panhandle Eastern Pipe Line Company..... 20
Southern Natural Gas Company..... 22
Southwestern Development Company..... 24

2557 Arkansas Louisiana Gas Company

Arkansas Louisiana Gas Company is a subsidiary of Arkansas Natural Gas Corporation, a part of the Cities Service System. The Company produces, purchases, transmits, distributes and sells natural gas. Its operations are conducted in portions of Arkansas, Louisiana and Texas. The major portion of the Company's revenue is obtained from direct distribution of natural gas to residential, commercial, industrial and other customers in a few more than 100 communities in the three States. Among the larger cities served at retail are Little Rock, North Little Rock, Texarkana, Pine Bluff and Eldorado in Arkansas; Shreveport in Louisiana; and Texarkana in Texas. Natural gas is also sold at wholesale to Consumers Gas Company, an affiliate, for distribution in the City of Hot Springs, Arkansas. Natural gas is also sold at wholesale to other companies for distribution in certain small communities in Arkansas and Louisiana. The natural gas supply is obtained principally from fields located in Louisiana and Texas.

Financing in 1936.

In July of 1936 a public offering was made through underwriters of $10,000,000 principal amount of the Company's First Mortgage Bonds, 4% Series due July 1, 1951 and dated July 1, 1936. The price to the public was 98

exclusive of accrued interest. Underwriting commissions were 3% and incidental expenses were estimated at
2558 1.71% leaving net proceeds of 93.29% or $9,328,632.
After giving effect to sinking fund provisions, cost of money to the Company on the basis of such net proceeds was slightly under 5%.

The Company's financing in 1936 included also the delivery of $10,000,000 principal amount of 5% Debentures due July 1, 1952 to its parent company for the purpose of discharging in part certain obligations to the parent company.

Financing in 1939.

In September of 1939 announcement was made of the private sale of two new series of bonds and of the issuance of a new debenture issue, all to refund the 1936 financing. Specifically, the new securities were issued in the following amounts:

1. $3,300,000 of First Mortgage Bonds, Series A, 2¾%, dated Sept. 1, 1939 and due serially 1940 to 1944, sold to two New York Banks.
2. $9,700,000 of First Mortgage Bonds, Series B, 3¼%, dated Sept. 1, 1939 and due serially 1945 to 1954, sold to six insurance companies.
3. $6,500,000 of 4¼% Debentures due in 1955.

Proceeds from the sale of the two series of mortgage bonds were devoted to the retirement of:

1. $9,100,000 of First Mortgage 4% Bonds due July 1, 1951 representing the remaining amount outstanding of the original $10,000,000 issue of 1936.
2. $3,500,000 out of the $10,000,000 total of 5% Debentures issued in 1936 to Arkansas Natural Gas Corporation (parent company).

2559 The new $6,500,000 4¼% Debenture issue went to the parent company to discharge the balance of the $10,000,000 of 5% Debentures issued in 1936.

These three 1939 issues were all sold at par.

2560 Cities Service Gas Company.

Cities Service Gas Company is a subsidiary of Empire Gas & Fuel Company, a part of the Cities Service System. The Company operates approximately 4,300 miles of pipeline and sells gas to local distributing companies serving approximately 223 cities and communities, includ-

ing Kansas City, St. Joseph, Springfield, Independence, Sedalia and Joplin, Missouri; Kansas City, Leavenworth, Atchison, Hutchinson, Ottawa, Topeka and Wichita, Kansas; and Bartlesville, Oklahoma.

In December of 1938 the Company sold privately to four banks and two insurance companies securities aggregating $35,000,000. This financing consisted of $20,000,000 of First Mortgage Pipeline 3¼% Bonds, scheduled to mature serially from March 20, 1947 to and including March 20, 1954, together with $15,000,000 of bank loans secured by an equal principal amount of First Pipeline Mortgage 3¼% Bonds scheduled to mature serially from March 20, 1940 to and including September 20, 1946.

Proceeds from this financing were used principally to retire $7,870,700 of Cities Service Gas Pipeline Company First Pipeline 6% Bonds due January 1, 1943 at 102 on February 28, 1939 and to retire $31,627,000 of Cities Service Gas Company First Pipeline 5½% Bonds due May 1, 1942 at 101 on February 28, 1939. Both of these refunded issues were obligations of Cities Service Gas Company.

2561 El Paso Natural Gas Company.

El Paso Natural Gas Company and its subsidiaries purchase natural gas from producers in the Lea County gas field in southeastern New Mexico, transmit it through a pipeline system and sell it at wholesale to public utilities and industrial customers located principally in or near El Paso, Texas; Douglas, Bisbee, Tucson, Superior and Phoenix, Arizona; and Cananea, Mexico. The pipeline system is in the neighborhood of 1,000 miles in length.

The derivation of operating revenue for the year 1938 was as follows:

Source	Amount	%
Public utilities including power plants	$2,264,666	46.0
Copper mining, smelting and refining	2,029,310	41.2
Other industrial	431,044	8.8
Gasoline, butane and propane	153,818	3.1
Crude oil and miscellaneous	45,062	0.9
	$4,923,900	100.0

Financing in 1936.

In June of 1936 a public offering was made through underwriters of $7,500,000 principal amount of First Mortgage Bonds, Series A, 4¼%, due June 1, 1951 together with $3,750,000 of Convertible Debentures, 4¼%, due June 1, 1946. The bonds were offered to the public at 98¼. After underwriting commissions of 3% and estimated incidental expenses of 1.35%, net proceeds were 94.15%, or $7,061,283.00 for the bonds. The convertible debentures were offered to the public at par. After underwriting commissions of 3¼% and estimated incidental expenses of 1.35% net proceeds were 95.15%, or $3,568,142 for the 2562 convertible debentures. The cost of money on the bonds is estimated at somewhere between 5½% and 6% giving effect to the sinking fund requirements, but the cost has not been computed precisely because of inadequate information presently at hand with respect to the sinking fund. The cost of money for the debentures was 5.38% for the 10-year term. However, both of these issues were called for redemption (except that the debentures were almost entirely converted prior thereto) on January 16, 1939 pursuant to financing undertaken in December, 1938, which is discussed below.

By prospectus dated September 10, 1936, 60,000 shares of the Company's $3.00 par value common stock were offered at a price of $20.00 per share. However, this stock did not represent new financing inasmuch as the shares were already outstanding and were held by Clarence J. Shearn as Trustee under a declaration of trust of Engineer's Public Service Company, dated April 28, 1936.

Financing in 1937.

On October 1, 1937, the Company sold at private sale $1,200,000 of 4% First Mortgage Bonds, Series B, to four insurance companies at a price of 97¾ plus accrued interest. The proceeds were used to reimburse the treasury for part of construction costs previously expended. The bonds were dated June 1, 1937 and were to mature June 1, 1952. However, the issue was called for redemption at 102 on January 16, 1939 pursuant to the 1938 financing.

2562½ During 1937 the Company sold to its employees and officers other than the president 5,521 shares of common stock at $17.55 per share.

Financing in 1938.

In February, 1938, the Company borrowed from banks $600,000 on its notes scheduled to mature at the rate of $200,000 in two years and $400,000 in three years at an average interest rate of 3¼%.

On December 15, 1938, the Company negotiated a $4,000,000 loan from the Chase National Bank of the City of New York evidenced by 3% Serial Notes maturing semi-annually over a period of seven years from that date. On the same date the Company also sold privately $6,000,000 of 3½% First Mortgage Bonds to five insurance companies and an educational institution at a price of 98.5 net plus accrued interest. These Bonds are dated December 1, 1938 and mature December 1, 1935. A sinking fund begins on May 31, 1946 (in other words after the completion of the payment of the serial bank loan) and is calculated to retire the entire issue by maturity. Upon the basis of a net price of 98.5 for the 3½% Bonds, cost of money would be between 3.65% and 3.75% for maturities of from seven to fifteen years indicated by the terms of the sinking fund.

Proceeds from the December, 1938 financing were used in large part by the Company to call and retire all its notes and funded debt previously outstanding including the First Mortgage Series A and Series B Bonds, the 4¼% Convertible Debentures and the $600,000 of 2½% and 3½%
Short Term Notes issued in February of 1938 as men-
2563 tioned above. According to the Company's annual report to stockholders for the year 1938, this financing operation, in addition to retiring the short term notes, improved the Company's cash position by approximately $1,000,000. The report states also that all of the debentures were converted into common stock except two debentures presented by error after the time limit provided for conversion under the debenture agreement.

2564 Lone Star Gas Corporation and Lone Star Gas Company (A Subsidiary).

Lone Star Gas Corporation is a holding company, one of whose principal subsidiaries is Lone Star Gas Company. The Corporation also owns 30% of the capital stock of Northern Natural Gas Company.

The Lone Star System, which consists of the operating

subsidiaries of the Corporation, produces, purchases, transmits and distributes natural gas in portions of Texas and Oklahoma and distributes natural gas (purchased from Northern Natural Gas Company) in Council Bluffs, Iowa. Natural gas is sold at retail in approximately 300 communities, including Dallas, Fort Worth, El Paso, Galveston, Waco, Wichita Falls, San Angelo and Abilene, Texas; and Council Bluffs, Iowa.

Lone Star Gas Company is engaged principally in the production and purchase of natural gas, the operation of a gas transmission system, and the sale of natural gas to System companies and to large industrial customers. It also serves Fort Worth and environs at retail.

Financing in 1936.

According to its annual report to stockholders the Corporation borrowed $2,900,000 "at satisfactory interest rates" to be repaid over a period of two and one-half years. Proceeds were used in connection with the redemption of 6% cumulative preference stock.

2565 Financing in 1937.

In August, 1937 the Corporation negotiated a $10,000,000 bank loan (Lone Star Gas Company concurrently negotiated a $6,000,000 bank loan). The banks and the amounts loaned by each are as follows:

$ 5,700,000	The Union Trust Company of Pittsburg.
2,500,000	The Chase National Bank of the City of New York.
1,000,000	The Mellon National Bank of Pittsburg.
600,000	The Farmers Deposit National Bank, Pittsburg.
200,000	The Union Savings Bank of Pittsburg.
$10,000,000	Total.

These notes are to mature in semi-annual installments aggregating $800,000 each from February 1, 1938 to and including February 1, 1942, and in a final installment of $2,800,000 on August 1, 1942. The notes are to bear interest at rates beginning at 1¼% for the first installment and increasing to 4% for the February 1st and August 1st, 1942 installments. The proceeds from these bank loans were used in connection with the redemption of $7,563,000 of Fifteen-Year 5% Debenture Gold Bonds due May 1,

1942, and the repayment of short term bank loans and notes.

In August of 1937 Lone Star Company negotiated bank loans in the amount of $6,000,000 as per the following schedules:

$3,420,000	The Union Trust Company of Pittsburg.
1,500,000	The Chase National Bank of the City of New York.
600,000	The Mellon National Bank of Pittsburg.
360,000	The Farmers Deposit National Bank, Pittsburg.
120,000	The Union Savings Bank of Pittsburg.
$6,000,000	Total.

The notes are to mature in semi-annual installments aggregating $450,000 each from February 1, 1938 to and including February 1, 1942, and in a final installment of $1,950,000 on August 1, 1942. The notes are to bear interest at rates beginning at 2% for the first installment and increasing to 4½% for the February 1st and August 1st, 1942 installments. The proceeds from these notes were used to discharge other bank loans and to effect a partial discharge of the Company's indebtedness to its parent company. A small amount was added to working capital.

2566

Financing in 1938.

In August of 1938 a public offering was made through underwriters of $20,000,000 principal amount of the Corporation's Fifteen-Year 3½% Sinking Fund (Convertible) Debentures due August 1, 1953. At the same time, the Corporation negotiated bank loans in the amount of $11,300,000. Proceeds from this financing were used to retire the Corporation's 6½% Preferred Stock, retire all outstanding bank loans, and advance to subsidiary companies funds sufficient to retire bank loans and all outstanding bonds and preferred stock. Included among the retirements were all unmatured balances on the $16,000,000 of bank loans effected in 1937 as hereinabove described.

The Debentures were offered to the public at 102. After underwriting commissions of 2% and estimated incidental expenses of 0.64%, net proceeds were 99.36% or $19,871,440. The rate of cost of such net proceeds is 3.63%, giving effect to the sinking fund.

The $11,300,000 of bank loans carry interest at 2⅞% per annum and mature as follows: $1,000,000 semi-annually from February 1, 1939 to August 1, 1942, inclusive, 2567 and $550,000 semi-annually from February 1, 1943 to August 1, 1945, inclusive. The banks and the amounts loaned by each are:

$ 6,780,000	The Union Trust Company of Pittsburg.
2,486,000	The Chase National Bank of the City of New York.
1,356,000	The Mellon National Bank of Pittsburg.
678,000	The Farmers Deposit National Bank, Pittsburg.
$11,300,000	Total.

Reduction of Interest Rate on Bank Loan.

In September of 1939 the Securities and Exchange Commission approved a reduction from 2⅞% to 2¾% in the rate of interest on the bank loan made in 1938 as described above. Although the loan was originally for $11,300,000, the reduction in the interest rate applied only to $8,750,000 since the $1,000,000 maturity of February 1, 1939, the like maturity of August 1, 1939 and the $550,000 maturity of August 1, 1945 were paid prior to the change in the interest rate. Interest savings of $116,728 were effected by the change. No changes other than the interest rate were made in the bank loan.

2568 Mississippi River Fuel Corporation.

Mississippi River Fuel Corporation owns and operates approximately 450 miles of main pipeline with a capacity of 100,000,000 cubic feet of gas per day extending from the Richland and Monroe gas fields in northern Louisiana to the city of St. Louis, Missouri, and nearby points in Illinois. The Corporation's supply of natural gas is secured by contracts with producers in the Louisiana fields including Interstate Natural Gas Company, Inc., and Hope Producing Company. The Corporation sells at wholesale to the Laclede Gas Light Company which distributes gas in St. Louis and to Cahokia Manufacturing Gas Company. It also has contracts for the delivery of gas directly to industrial customers.

Early in 1937, the Corporation sold privately $10,000,-

000 of 4% First Mortgage Pipeline Bonds dated February 1, 1937 and due February 1, 1952. Proceeds were used for the redemption of approximately $9,482,000 of First Mortgage 6% Bonds due in 1944 at 105 on February 15, 1937.

The majority of the Corporation's Common stock is owned by a syndicate which includes Standard Oil Company (New Jersey), United Gas Corporation, Columbian Carbon Company and United Carbon Company.

2569 Northern Natural Gas Company.

Northern Natural Gas Company owns and operates a natural gas pipeline system, together with its subsidiaries, which produces, gathers, transmits and distributes natural gas. The line is approximately 2,000 miles long and extends from the Texas Panhandle and the Hugoton, Kansas, gas fields to South Dakota and Minnesota. The gas is sold at wholesale in Iowa, Kansas, Nebraska, South Dakota and Minnesota. Among the cities supplied are Omaha, Lincoln, Council Bluffs, Des Moines, Sioux City, Minneapolis and Rochester. The supply of natural gas is obtained largely through purchase contracts with producing companies but considerable acreage of proved leases and a number of producing wells are owned.

The Company's common stock is owned as follows:

30% by Lone Star Gas Corporation,
35% by North American Light & Power Company, and
35% by United Light & Railways Company.

Published reports indicate that during recent years prior to 1939 the Company has sold privately the following securities:

1. $16,000,000 of First Mortgage and First Lien Bonds, Series A, 4¼%, due July 1, 1947.
2. $2,000,000 of First Mortgage and First Lien Bonds, Series B, 4¼%, due July 1, 1947.
3. $3,000,000 of 4½% Debentures, dated July 1, 1938, due July 1, 1948.

No further details are available with respect to the foregoing financing.

2570 Financing in 1939.

The Company sold privately at par $16,000,000 principal amount of First Mortgage and First Lien, Series A, 3¼% Bonds due July 1, 1954 to five insurance companies.

A fee of one-half of one per cent was paid to a banking house for negotiating the sale.

Proceeds from the sale of the new bonds were applied toward the redemption of all previously outstanding funded debt, namely the Series A and B bonds and the 4½% debentures listed above (but in principal amounts reduced from those shown above).

Concurrently with the bond issue, the Company negotiated a bank loan of $6,000,000 at 2½%, maturing $500,000 on July 1, 1940 and semi-annually thereafter to and including January 1, 1946. Proceeds from this loan were to be applied as follows:

$3,600,000 for construction of approximately 240 miles of 16 inch transmission line from Sioux City, Iowa, to a point near Minneapolis, Minnesota.

$1,200,000 for compressor station property, laterals, etc.

Balance to defray cost of additions and improvements of present property.

2571 Oklahoma Natural Gas Company.

Oklahoma Natural Gas Company purchases, produces (to a minor extent), distributes and sells natural gas at wholesale and retail. Production properties, transmission lines and distribution systems in Oklahoma constitute the major portion of the system but the Company also has two small groups of properties in Kansas which are not physically connected with the Oklahoma system. Among the principal communities served at retail are Tulsa and Oklahoma City. A small amount of revenue is derived from sales at wholesale at city gates. The Company purchases the major portion of its requirements from producers operating in a number of small fields throughout Oklahoma and principally in the general area around Tulsa and Oklahoma City. The system includes approximately 2200 miles of transmission lines and 1900 miles of distribution lines.

Financing in 1936.

In June of 1936 a public offering was made through underwriters of $20,000,000 principal amount of First Mortgage Bonds Series A, 4½% due May 1, 1951 and $10,000,000 principal amount of 5% Convertible Debentures due May 1, 1946.

The bonds were offered to the public at 98½. After un-

derwriters' commissions of 3% and estimated incidental expenses of 0.66%, net proceeds were 94.84% or $18,967,-087. The rate of cost for such net proceeds is 5.61% giving effect to the sinking fund requirements.

2572 The debentures were offered to the public at 100. After underwriters' commissions of 3½% and estimated incidental expenses of 0.66%, net proceeds were 95.84% or $9,583,543. The rate of cost for such net proceeds is 5.55%.

In October of 1936 a public offering was made of 22,200 shares of Convertible 6% Prior Preference Stock of $100 par value per share. The stock was offered to the public at $100 per share and underwriting commissions were $4.00 per share. Strictly speaking, the offering of these shares did not represent new financing inasmuch as the shares had been delivered to Gas Utilities Company on June 17, 1936 in exchange for $2,220,000 principal amount of 5% Serial Notes, Series B, due serially from November 1, 1936 to November 1, 1951 (such notes were those of Oklahoma Natural Gas Company who cancelled them upon receiving them pursuant to this exchange). The public offering in October of 1936 was thus made by the underwriters who received the stock from Gas Utilities Company, who in turn distributed the proceeds to its stockholders.

Pursuant to financing undertaken in 1939, as described below, all the securities involved in this 1936 financing were retired in 1939 insofar as amounts were then outstanding. Specifically, the redemptions were as follows:

1. Entire outstanding issue of First Mortgage Bonds, Series A, 4½%, due May 1, 1951, called for redemption at 105 on September 22, 1939.

2. Entire issue of 5% Convertible Debentures due May 1, 1946, called for redemption at 110 on October 7, 1939.

3. Entire issue of 6% Cumulative Convertible Prior Preference Stock called for redemption at $110 per share on October 2, 1939.

2573 Financing in 1939.

By prospectus dated August 17, 1939 the following securities of the Company were publicly offered through underwriters:

1. $17,000,000 principal amount of First Mortgage Bonds, Series B, 3¾%, due August 1, 1955 at 103½.

2. 58,000 shares of $5.50 Convertible Prior Preferred

stock (no par value; stated value $100.00 per share) with cumulative dividends at $104.00 per share.

The proceeds of this financing together with proceeds from an $8,000,000 bank loan, hereinafter described, were applied largely toward the redemption of the 1936 financing as already noted.

The new Series B bonds were offered at 103½ to yield 3.46% to the August 1, 1955 maturity date. After underwriting commissions (2%) and estimated incidental expenses ($0.55), net proceeds were $17,160,965 or 100.95% of par. The cost of these net proceeds is approximately 3.82% giving effect to sinking fund retirements, but not to call premiums and expenses on the retired 1936 issue, which premiums and expenses have not been deducted from the net proceeds here mentioned.

The new preferred stock was offered at $104.00 per share to yield 5.29%. Underwriting commissions of $3.00 per share and estimated incidental expenses of $0.49 per share left net proceeds of $100.51 per share. The dividend rate of $5.50 per share represents a cost of 5.47% on these net proceeds.

Simultaneously with the sale of the new bonds and stock the Company proposed to issue its unsecured promissory notes to banks evidencing a loan of $8,000,000 in the aggregate. The amount of the loan is subject to re-
2574 duction to the extent that conversion of the 1936 issues prior to redemption reduces the need for funds for such redemption. The notes bear interest at 2.19% to April 1, 1940 and thereafter at 2.75%. The loan is scheduled to mature as follows, assuming a maximum loan of $8,000,000:

Amount	Date Due
$1,500,000	4-1-41
1,100,000	4-1-42
1,200,000	4-1-43
1,200,000	4-1-44
1,200,000	4-1-45
1,200,000	4-1-46
600,000	10-1-46
$8,000,000	

2575 **Panhandle Eastern Pipe Line Company.**

Panhandle Eastern Pipe Line Company, directly and through subsidiaries, produces, purchases, transmits and sells natural gas.

Panhandle Eastern Pipe Line Company operates a natural gas transmission line from the Amarillo gas field in the Texas Panhandle through the States of Oklahoma, Kansas, Missouri and Illinois to a point in Indiana near Dana, adjacent to the Illinois-Indiana State line. The major portion of gas transmitted is sold to distributing companies and other transmission companies for resale. Almost all of the balance is sold to industrial customers.

Among the principal distributing utilities obtaining gas from the Panhandle Eastern system are Central Illinois Electric and Gas Company, Central Illinois Light Company, Central Illinois Public Service Company, Illinois Iowa Power Company, Missouri Power & Light Company and Michigan Consolidated Gas Company (formerly Detroit City Gas Company). The supply for the last named company is transported from Panhandle's line to Detroit by Michigan Gas Transmission Corporation.

In March, 1937, a public offering was made through underwriters of $24,000,000 principal amount of First Mortgage and First Lien Bonds, Series A, 4% due March 1, 1952. The bonds were offered to the public at 97.50. After underwriting commissions of 2% and estimated incidental
expenses of 0.48%, net proceeds were 95.02% or $22,-
2576 805,528 for the issue. The rate of cost of such net
proceeds is 4.68%, giving effect to sinking fund requirements.

During 1937 the Company obtained bank loans of approximately $5,000,000, of which $2,000,000 was converted into 2½% notes due June 15, 1939.

Receivers of Missouri-Kansas Pipe Line Company held a transferable warrant evidencing the right to subscribe for 80,000 shares of Panhandle Eastern Pipe Line Company common stock at $25.00 per share. Pursuant to court order these rights were distributed in 1939 to holders of the stocks of Missouri-Kansas Pipe Line Company. This offering was covered by a prospectus dated July 29, 1939.

Columbia Oil and Gasoline Corporation by contract dated January 31, 1936 agreed with Panhandle Eastern Pipe Line Company, et al., to purchase at $25.00 per share any

of the 80,000 shares not subscribed or purchased by exercise of the rights.

Net proceeds from the sale of the stock, estimated at $1,918,600 after expenses, were to be used to reimburse the treasury for part of expenditures made in 1936.

2577 Southern Natural Gas Company.

Southern Natural Gas Company (successor in reorganization to Southern Natural Gas Corporation) operates a natural gas pipeline system from the Monroe, Louisiana, gas field across Mississippi and Alabama and into Georgia. Gas is sold to distributing companies in these States and to a few industrial customers. Among the communities served by the distributing companies are Atlanta, Columbus, Decatur, Macon and Rome, Georgia; Anniston, Gadsden, Montgomery and Tuscaloosa, Alabama; and Columbus, Meridian and Vicksburg, Mississippi.

Financing in 1936.

In November of 1936 a public offering was made through underwriters of $15,000,000 principal amount of First Mortgage Pipe Line Sinking Fund Bonds 4½%, due October 1, 1951. The bonds were offered to the public at par. After underwriting commissions of 2½% and estimated incidental expenses of 1.21%, net proceeds were 96.29% or $14,444,000. The cost of such net proceeds is 5.13% giving effect to sinking fund requirements.

Financing in 1937.

In connection with the acquisition of Alabama Gas Company, the Company secured a bank loan in the amount of $2,000,000 of which $175,000 was repaid December 1, 1937, the balance to mature in installments of $175,000 on each June 1st and December 1st to and including December 1, 1939 and the final installment of $1,125,000 on June 1, 1940. This loan carries interest at the rate of 4½% and was made by the New York Trust Company, New York.

2578

In December, 1937 the Company sold to an insurance company $650,000 of a new series of its First Mortgage Pipeline Sinking Fund Bonds at 97¾ plus accrued interest. The bonds bear interest at 4½% and mature April 1, 1952. The proceeds were used to finance in part additional com-

pressing facilities constructed during the year. A sinking fund is provided for the retirement of the bonds in approximately equal annual installments commencing in 1938.

Financing in 1939.

On March 10, 1939 the Company repaid to The New York Trust Company the balance of $1,475,000 due on the 4½% loan obtained in 1937 (see above). On the same date, the Company issued a 4½% collateral note for $900,000 to The First National Bank of Birmingham, Alabama. Proceeds from this new loan and treasury funds were used to repay the 1937 loan. The new loan is payable as follows:

$100,000 semi-annually on December 31, 1939, June 30th and December 31, 1940.

$150,000 on June 30 and December 31, 1941, and June 30th and December 31, 1942.

In October of 1939 the Company filed a declaration with the Securities and Exchange Commission in regard to the proposed reduction of the interest rate on the $900,000 loan from 4½% to 4%. The Company stated that the holder of the note has agreed to the reduction. Hearing has been set for October 13, 1939.

2579 Southwestern Development Company.

Southwestern Development Company is a holding company organized under the laws of Colorado in 1924. The Company owns 100% of the common stock of subsidiaries engaged in the production, transportation and/or distribution of natural gas for resale or sale to domestic, commercial and industrial customers in Texas and New Mexico. One of the most important communities served is Amarillo, Texas.

The Company also has the following interests:

42.50% in Colorado Interstate Gas Company
26.62% in Texoma Natural Gas Company
13.31% in Natural Gas Pipeline Company of America
100.00% in Canadian River Gas Company.

Mission Oil Company owns approximately 47% and Consolidated Oil Corporation owns about 51% of the stock of Southwestern Development Company.

Financing in 1936.

Pursuant to a loan agreement with Guaranty Trust Company of New York dated July 1, 1936 the Company issues its promissory notes to the bank in the amount of $6,376,348.36 to cover indebtedness of the same amount owing to the bank. The maturities and annual interest rates on this loan were:

Amount	Date Due	Interest Rate
$ 750,000.00	7-1-37	2%
750,000.00	7-1-38	2½%
750,000.00	7-1-39	3%
750,000.00	7-1-40	3½%
3,376,348.36	7-1-41	4%
$6,376,348.36		

2580 The Company also issued unsecured 4% notes due July 1, 1942 in the amount of $1,762,003.08 to common stockholders in payment of dividends. These notes were subsequently redeemed.

Financing in 1937.

A loan agreement with the same New York bank dated September 23, 1937 covered a 4% loan in the following particulars:

Amount	Date Due
$ 300,000.00	1-2-39
300,000.00	1-2-40
300,000.00	1-2-41
300,000.00	1-2-42
2,092,000.00	1-2-43
$3,292,000.00	

The proceeds were used to acquire $3,292,000 principal amount of South Plains Gas Company First Mortgage and Collateral Trust 6% Bonds due January 1, 1945. The Company acquired $150,000 of these bonds from Amarillo Gas Company and the balance from Consolidated Oil Corporation.

In 1937 the Company also issued $2,040,300 of unsecured 4% notes maturing July 1, 1943 in payment of a dividend on its common stock.

Financing in 1939.

An amendment of the July 1, 1936 loan agreement was entered into as of July 1, 1939 whereby the July 1, 1941 maturity of the July 1, 1936 loan agreement was largely extended and the interest rate reduced from 4% to 3½%. New maturities were:

2581 Amount	Date Due
$ 600,000.00	7-1-41
600,000.00	7-1-42
600,000.00	7-1-43
762,298.36	7-1-44
$2,562,298.36	

A third loan agreement was entered into with the same bank providing for the issuance of two notes, as follows:

1. A 3% collateral note in the amount of $2,921,784.46 dated August 1, 1939 to mature:

$ 359,486.10	on	7-1-40
600,000.00	on	7-1-41
600,000.00	on	7-1-42
600,000.00	on	7-1-43
762,298.36	on	7-1-44
$2,921,784.46		

This note was issued to refund a note of the same amount representing the balance due under the July 1, 1936 loan agreement as amended July 1, 1939.

2. A 3% collateral note in the amount of $4,962,084.46 to be dated on or before January 2, 1940 and to mature:

$ 359,486.10	on	7-1-40
750,000.00	on	7-1-41
750,000.00	on	7-1-42
750,000.00	on	7-1-43
750,000.00	on	7-1-44
1,602,598.36	on	7-1-45
$4,962,084.46		

This note will refund the unpaid balance of the $2,921,784.46 on the note dated August 1, 1939 (item No. 1 above) and will provide funds for the redemption of the $2,040,300 of dividend notes due July 1, 1943, to be redeemed in full on January 2, 1940.

A balance of $2,751,340 under the September 23, 1937 loan agreement was paid. Funds for this purpose were secured by selling $3,150,000 principal amount of South Plains Gas Company 6% bonds (see 1937 financing re acquisition of these bonds) to West Texas Gas Company. (West Texas Gas Company had assumed these bonds in connection with its acquisition of South Plains Gas Company.) West Texas Gas Company obtained funds for purchase of these bonds by issuance of a note to the New York bank in the amount of $3,150,000 under a loan agreement of August, 1939. The note bears interest at 3% and matures $150,000 semi-annually on January 2 and July 1 beginning January 2, 1940 and continuing until January 1, 1945 when the balance of $1,650,000 becomes due. The South Plains Gas Company bonds were pledged as collateral after reducting the interest rate thereon from 6% to 3% and amending the sinking fund to conform with the note installments.

2582

Amarillo Gas Company, a subsidiary of the Company, had borrowed $450,000 for refunding purposes from the same bank in 1937 by issuance of a 4% note dated August 1, 1937 and maturing serially July 1, 1938 to 1941. The note was guaranteed by the Company. A balance of $270,000 on this loan was refunded in 1939 by supplemental loan agreement dated August 1, 1939 covering a new 3% note maturing:

$50,000	on	July 1, 1940
50,000	on	July 1, 1941
50,000	on	July 1, 1942
50,000	on	July 1, 1943
70,000	on	July 1, 1944
$270,000		

TABLE I. COMPUTATION OF THE RATE OF RETURN ON NET INVESTMENT AFTER AMORTIZATION RESERVE WHEN A RETURN OF 8% IS ALLOWED ON THE TOTAL INVESTMENT TOGETHER WITH ANNUAL AMORTIZATION COMPUTED ON A STRAIGHT LINE BASIS. COMPUTATIONS ARE ILLUSTRATED BY REFERENCE TO AN INVESTMENT OF $1,000,000 OVER A TEN YEAR PERIOD

A	B	C	D	E	F	G	H
	Amortization Data			Investment Less Reserve			
Year	Annual Allowance for Amortization	Amortization Reserve At First of Each Year	Amortization Reserve At End of Each Year	At First of Each Year	At End of Each Year	8% on The Total Investment (8% of $1,000,000)	Rate of Return on Net Investment (i.e., Investment Less Reserve) (G ÷ E)
1	$ 100,000	$ 0	$ 100,000	$1,000,000	$900,000	$80,000	8.00%
2	100,000	100,000	200,000	900,000	800,000	80,000	8.89
3	100,000	200,000	300,000	800,000	700,000	80,000	10.00
4	100,000	300,000	400,000	700,000	600,000	80,000	11.43
5	100,000	400,000	500,000	600,000	500,000	80,000	13.33
6	100,000	500,000	600,000	500,000	400,000	80,000	16.00
7	100,000	600,000	700,000	400,000	300,000	80,000	20.00
8	100,000	700,000	800,000	300,000	200,000	80,000	26.67
9	100,000	800,000	900,000	200,000	100,000	80,000	40.00
10	100,000	900,000	1,000,000	100,000	0	80,000	80.00
Totals	$1,000,000	xxxxxxx	xxxxxxxxx	xxxxxxxxx	xxxxxxxxx	$800,000	14.55%*

* Average; obtained by dividing the total of column G ($800,000) by the total of column E ($5,500,000).

TABLE I. COMPUTATION OF THE RATE OF RETURN ON NET INVESTMENT AFTER AMORTIZATION RESERVE WHEN A RETURN OF 8% IS ALLOWED ON THE TOTAL INVESTMENT TOGETHER WITH ANNUAL AMORTIZATION COMPUTED ON A STRAIGHT LINE BASIS. COMPUTATIONS ARE ILLUSTRATED BY REFERENCE TO AN INVESTMENT OF $1,000,000 OVER A TEN YEAR PERIOD

Exhibit 182

D	E	F	G	H	I	J
DATA						
IZATION RESERVE	INVESTMENT LESS RESERVE		8% ON THE TOTAL INVESTMENT (8% OF $1,000,000)	RATE OF RETURN ON NET INVESTMENT (I.E., INVESTMENT LESS RESERVE) (G ÷ E)	8% OF INVESTMENT LESS RESERVE (8% OF E)	EXCESS OF 8% ON TOTAL INVESTMENT OVER 8% ON INVESTMENT LESS RESERVE (G - I)
T OF EAR — AT END OF EACH YEAR	AT FIRST OF EACH YEAR	AT END OF EACH YEAR				
0 $ 100,000	$1,000,000	$900,000	$80,000	8.00%	$80,000	$ 0
00 200,000	900,000	800,000	80,000	8.89	72,000	8,000
00 300,000	800,000	700,000	80,000	10.00	64,000	16,000
00 400,000	700,000	600,000	80,000	11.43	56,000	24,000
00 500,000	600,000	500,000	80,000	13.33	48,000	32,000
00 600,000	500,000	400,000	80,000	16.00	40,000	40,000
00 700,000	400,000	300,000	80,000	20.00	32,000	48,000
00 800,000	300,000	200,000	80,000	26.67	24,000	56,000
00 900,000	200,000	100,000	80,000	40.00	16,000	64,000
00 1,000,000	100,000	0	80,000	80.00	8,000	72,000
X XXXXXXXXX	XXXXXXXXX	XXXXXXXXX	$800,000	14.55%*	$440,000	$360,000

* TOTAL OF COLUMN G ($800,000) BY THE TOTAL OF COLUMN E ($5,500,000).

TABLE II. COMPUTATION OF THE RATE OF RETURN ON NET INVESTMENT AFTER AMORTIZATION RESERVE WHEN A RETURN OF 8% IS ALLOWED ON THE TOTAL INVESTMENT TOGETHER WITH ANNUAL AMORTIZATION ALLOWANCE COMPUTED ON A 2% SINKING FUND BASIS. COMPUTATIONS ARE ILLUSTRATED BY REFERENCE TO AN INVESTMENT OF $1,000,000 OVER A TEN YEAR PERIOD

A	B	C	D	E	F	G	H	I
				Amortization Reserve		Investment Less Reserve		
Year	Annual Allowance for Amortization on a 2% Sinking Fund Basis	Annual Interest Accrual on Amortization Reserve (2% of E)	Total Annual Addition to Amortization Reserve (B + C)	At First of Each Year	At End of Each Year	At First of Each Year	At End of Each Year	8% on Total Investment (8% of $1,000,000)
1	$ 91,327 #	0	$ 91,327	$ 0	$ 91,327	$1,000,000	$908,672	$80,000
2	91,327	1,826	93,153	91,327	184,480	908,672	815,519	80,000
3	91,327	3,689	95,016	184,480	279,496	815,519	720,503	80,000
4	91,327	5,589	96,916	279,496	376,412	720,503	623,587	80,000
5	91,327	7,528	98,855	376,412	475,267	623,587	524,732	80,000
6	91,327	9,505	100,832	475,267	576,099	524,732	423,900	80,000
7	91,327	11,521	102,848	576,099	678,947	423,900	321,052	80,000
8	91,327	13,578	104,905	678,947	783,852	321,052	216,147	80,000
9	91,327	15,677	107,004	783,852	890,856	216,147	109,143	80,000
10	91,327	17,817	109,144	890,856	1,000,000	109,143	0	80,000
Totals	$913,270	$86,730	$1,000,000	xxxxxxx	xxxxxxxxx	xxxxxxxxx	xxxxxxx	$800,000

$91,327 SET ASIDE AT THE END OF EACH YEAR WITH INTEREST AT 2% COMPOUNDED ANNUALLY WILL AMOUNT TO $1,000,000 AT THE END OF TEN YEARS.

AVERAGE: OBTAINED BY DIVIDING THE TOTAL OF COLUMN J ($713,270) BY THE TOTAL OF COLUMN G ($5,663,255).

TABLE 11. COMPUTATION OF THE RATE OF RETURN ON NET INVESTMENT AFTER AMORTIZATION RESERVE WHEN A RETURN OF 8% IS ALLOWED ON THE TOTAL INVESTMENT TOGETHER WITH ANNUAL AMORTIZATION ALLOWANCE COMPUTED ON A 2% SINKING FUND BASIS. COMPUTATIONS ARE ILLUSTRATED BY REFERENCE TO AN INVESTMENT OF $1,000,000 OVER A TEN YEAR PERIOD

C	D	E	F	G	H	I	J	K
Annual Interest Accrual on Amortization Reserve (2% of E)	Total Annual Addition to Amortization Reserve (B + C)	Amortization Reserve At First of Each Year	Amortization Reserve At End of Each Year	Investment Less Reserve At First of Each Year	Investment Less Reserve At End of Each Year	8% on Total Investment (8% of $1,000,000)	8% on Total Investment Less Annual Interest Accrual on Amortization Reserve (I - C)	Rate of Return on Net Investment (i.e., Investment Less Reserve) (J ÷ G)
0	$ 91,327	$ 0	$ 91,327	$1,000,000	$908,672	$80,000	$ 80,000	8.00%
1,826	93,153	91,327	184,480	908,672	815,519	80,000	78,174	8.60
3,689	95,016	184,480	279,496	815,519	720,503	80,000	76,311	9.36
5,589	96,916	279,496	376,412	720,503	623,587	80,000	74,411	10.33
7,528	98,855	376,412	475,267	623,587	524,732	80,000	72,472	11.62
9,505	100,832	475,267	576,099	524,732	423,900	80,000	70,495	13.43
11,521	102,848	576,099	678,947	423,900	321,052	80,000	68,479	16.15
13,578	104,905	678,947	783,852	321,052	216,147	80,000	66,422	20.69
15,677	107,004	783,852	890,856	216,147	109,143	80,000	64,323	29.76
17,817	109,144	890,856	1,000,000	109,143	0	80,000	62,183	56.97
$86,730	$1,000,000	xxxxxxx	xxxxxxxxx	xxxxxxxxx	xxxxxxx	$800,000	$713,270	12.59%

EACH YEAR WITH INTEREST AT 2% COMPOUNDED ANNUALLY WILL AMOUNT TO $1,000,000 AT THE END OF TEN YEARS.

E TOTAL OF COLUMN J ($713,270) BY THE TOTAL OF COLUMN G ($5,663,255).

TABLE III. COMPUTATION OF THE RATE OF RETURN ON NET INVESTMENT AFTER AMORTIZATION RESERVE WHEN A RETURN OF 8% IS ALLOWED ON THE TOTAL AMOUNT OF THE INVESTMENT TOGETHER WITH AN ANNUAL AMORTIZATION ALLOWANCE COMPUTED ON AN 8% SINKING FUND BASIS. COMPUTATIONS ARE ILLUSTRATED BY REFERENCE TO AN INVESTMENT OF $1,000,000 OVER A TEN YEAR PERIOD

A	B	C	D	E	F	G	H	I	J
				Amortization Reserve		Investment Less Reserve			8% on
Year	Annual Allowance for Amortization on an 8% Sinking Fund Basis	Annual Interest Accrual on Amortization Reserve (8% of E)	Total Annual Addition to Amortization Reserve (B + C)	At First of Each Year	At End of Each Year	At First of Each Year	At End of Each Year (G - D)	8% on Total Investment (8% of $1,000,000)	Investme Annual Accrual tization (I -
1	$ 69,029 #	$ 0	$ 69,029	$ 0	$ 69,029	$1,000,000	$930,971	$ 80,000	$ 80
2	69,029	5,523	74,552	69,029	143,581	930,971	856,419	80,000	7
3	69,029	11,487	80,516	143,581	224,097	856,419	775,903	80,000	6
4	69,029	17,929	86,958	224,097	311,055	775,903	688,945	80,000	6
5	69,029	24,885	93,914	311,055	404,969	688,945	595,031	80,000	5
6	69,029	32,398	101,427	404,969	506,396	595,031	493,604	80,000	4
7	69,029	40,512	109,541	506,396	615,937	493,604	384,063	80,000	3
8	69,029	49,275	118,304	615,937	734,241	384,063	265,759	80,000	3
9	69,029	58,739	127,768	734,241	862,009	265,759	137,991	80,000	2
10	69,029	68,962	137,991	862,009	1,000,000	137,991	-0-	80,000	1
Totals	$690,290	$309,710	$1,000,000	xxxxxxx	xxxxxxx	xxxxxxxx	xxxxxxx	$800,000	$490

$69,029 set aside at the end of each year with interest at 8% compounded annually will amount to $1,000,000 at the end of ten years.

* Average; obtained by dividing the total of column J ($490,290) by the total of column G ($6,128,686)

TABLE III. COMPUTATION OF THE RATE OF RETURN ON NET INVESTMENT AFTER AMORTIZATION RESERVE WHEN A RETURN OF 8% IS ALLOWED ON THE TOTAL AMOUNT OF THE INVESTMENT TOGETHER WITH AN ANNUAL AMORTIZATION ALLOWANCE COMPUTED ON AN 8% SINKING FUND BASIS. COMPUTATIONS ARE ILLUSTRATED BY REFERENCE TO AN INVESTMENT OF $1,000,000 OVER A TEN YEAR PERIOD

D	E	F	G	H	I	J	K
Total Annual Addition to Amortization Reserve (E + C)	Amortization Reserve: At First of Each Year	Amortization Reserve: At End of Each Year	Investment Less Reserve: At First of Each Year	Investment Less Reserve: At End of Each Year (G - D)	8% on Total Investment (8% of $1,000,000)	8% on Total Investment Less Annual Interest Accrual on Amortization Reserve (I - C)	Rate of Return on Net Investment (i.e., Investment Less Reserve) (J ÷ G)
$ 69,029	$ 0	$ 69,029	$1,000,000	$930,971	$ 80,000	$ 80,000	8.00%
74,552	69,029	143,581	930,971	856,419	80,000	74,477	8.00
80,516	143,581	224,097	856,419	775,903	80,000	69,513	8.00
86,958	224,097	311,055	775,903	688,945	80,000	63,071	8.00
93,914	311,055	404,969	688,945	595,031	80,000	58,115	8.00
101,427	404,969	506,396	595,031	493,604	80,000	47,602	8.00
109,541	506,396	615,937	493,604	384,063	80,000	39,488	8.00
118,304	615,937	734,241	384,063	265,759	80,000	30,725	8.00
127,768	734,241	862,009	265,759	137,991	80,000	21,261	8.00
137,991	862,009	1,000,000	137,991	-0-	80,000	11,038	8.00
$1,000,000	xxxxxxx	xxxxxxx	xxxxxxxxx	xxxxxxx	$800,000	$490,290	8.00%*

WITH INTEREST AT 8% COMPOUNDED ANNUALLY WILL AMOUNT TO $1,000,000 AT THE END OF TEN YEARS.

COLUMN J ($490,290) BY THE TOTAL OF COLUMN G ($6,128,686)

2590

EXHIBIT 183

Table I. Number of Banks and Amount of Bank Deposits in the United States

December 31, 1923 — June 30, 1939
(Exclusive of Deposits Made By One Bank in Other Banks)

Date	All Banks in the United States		Member Banks of the Federal Reserve System		Non-Member Banks	
	Number of Banks	Amount of Deposits (000,000 omitted)	Number of Banks	Amount of Deposits (000,000 omitted)	Number of Banks	Amount of Deposits (000,000 omitted)
1923 —Dec. 31	29,505	$42,163	9,774	$24,996	19,731	$17,167
1924 " "	28,806	45,835	9,587	27,836	19,219	17,999
1925 " "	28,257	49,224	9,489	30,029	18,768	19,195
1926 " "	27,367	50,155	9,260	30,474	18,107	19,681
1927 " "	26,416	52,909	9,034	32,063	17,382	20,846
1928 " "	25,576	56,766	8,837	34,826	16,739	21,940
1929 " "	24,630	55,289	8,522	33,865	16,108	21,424
1930 " "	22,769	53,039	8,052	32,560	14,717	20,479
1931 " "	19,966	45,821	7,246	27,432	12,720	18,389
1932 " "	18,390	41,643	6,816	24,803	11,574	16,840
1933 " "	15,011	38,505	6,011	23,771	9,000	14,734
1934 " "	16,042	44,770	6,442	28,943	9,600	15,828
1935 " "	15,837	48,964	6,387	32,159	9,450	16,805
1936 " "	15,628	53,701	6,376	35,893	9,252	17,808
1937 " "	15,393	52,440	6,341	34,810	9,052	17,630
1938 " "	15,206	54,054	6,338	36,211	8,868	17,843
1939*—June 30	15,082	55,988	6,330	38,027	8,752	17,961

*Non-Member Bank data are preliminary.
Source of Data: Annual and Monthly Reports of the Board of Governors of the Federal Reserve System.

2501

Table II. Bank Deposits of All Member-Banks of the Federal Reserve System
December 31, 1923 to June 30, 1939
(Exclusive of Deposits Made By One Bank in Other Banks)

			Demand Deposits		Time Deposits	
		Total Deposits	Amount	% of Total Deposits	Amount	% of Total Deposits
		(000,000 omitted)	(000,000 omitted)		(000,000 omitted)	
1923	Dec. 31	$24,996	$16,345	65.39%	$ 8,651	34.61%
1924	" "	27,836	18,031	64.78	9,805	35.22
1925	" "	30,029	19,376	64.52	10,653	35.48
1926	" "	30,474	19,034	62.46	11,440	37.54
1927	" "	32,063	19,298	60.19	12,765	39.81
1928	" "	34,826	21,373	61.37	13,453	38.63
1929	" "	33,865	20,632	60.92	13,233	39.08
1930	" "	32,560	19,014	58.40	13,546	41.60
1931	" "	27,432	16,116	58.75	11,316	41.25
1932	" "	24,803	14,253	57.46	10,550	42.54
1933	" "	23,771	14,735	61.99	9,035	38.01
1934	" "	28,943	19,176	66.25	9,767	33.75
1935	" "	32,159	21,900	68.10	10,259	31.90
1936	" "	35,893	25,063	69.83	10,830	30.17
1937	" "	34,810	23,427	67.30	11,383	32.70
1938	" "	36,211	24,842	68.60	11,369	31.40
1939	June 30	38,027	26,464	69.59	11,563	30.41

Source: Annual and Monthly Reports of the Board of Governors of the Federal Reserve System.

2592

Table III

Average Annual Velocity or Turnover of Bank Deposits 1923 to 1938

Year	100 Leading Cities Excluding New York City	New York City
1923	37.3	69.9
1924	36.4	70.0
1925	37.8	76.3
1926	39.3	83.3
1927	40.8	90.5
1928	43.8	112.2
1929	47.2	132.4
1930	40.0	83.2
1931	32.9	56.8
1932	28.4	41.5
1933*	28.0	38.9
1934	26.8	36.7
1935	26.3	34.4
1936	26.4	33.8
1937	26.5	32.0
1938	23.4	27.0
1939†	22.5	23.2

* Average of eleven months because of bank holiday in March, 1933.

† Average of first seven months.

Source: Federal Reserve Bank of New York, as reported in Standard Statistics Company's Trade and Securities Service, Volume 3, Statistical Section.

2593

TABLE IV

Total, Required and Excess Reserves of All Member Banks of the Federal Reserve System

Date	Total Reserves	Required Reserves	Excess Reserves
	(In Millions of Dollars)		
Dec. 31, 1923	$ 1,898	$ 1,884	$ 14
" " 1924	2,220	2,161	59
" " 1925	2,212	2,256	44*
" " 1926	2,194	2,250	56*
" " 1927	2,487	2,424	63
" " 1928	2,389	2,430	41*
" " 1929	2,355	2,428	73*
" " 1930	2,471	2,375	96
" " 1931	1,961	1,994	33*
" " 1932	2,509	1,933	576
" " 1933	2,729	1,870	859
" " 1934	4,096	2,282	1,814
" " 1935	5,587	2,743	2,844
Aug. 16, 1936	Requirements increased; see Table V		
Dec. 31, 1936	6,606	4,622	1,984
Mar. 1, 1937	Requirements increased; see Table V		
May 1, 1937	" " " " "		
Dec. 31, 1937	7,027	5,815	1,212
April 16, 1938	Requirements decreased; see Table V		
Dec. 31, 1938	8,724	5,519	3,205
Aug. 31, 1939	10,918	6,160	4,758
Sept. 20, 1939	11,549	6,274	5,275

* Deficiency.

Source: Annual and Monthly Reports of the Board of Governors of the Federal Reserve System.

2594

TABLE V

Reserve Requirements of Member Banks of the Federal Reserve System (Percentage of Deposits Required for Reserves)

	6/21/17 to 8/15/36	8/16/36 to 2/28/37	3/1/37 to 4/30/37	5/1/37 to 4/15/38	4/16/38 to Date
On Net Demand Deposits					
Central Reserve City	13%	19½%	22½%	26%	22½%
Reserve City	10	15	17½	20	17½
Country	7	10½	12½	14	12
On Time Deposits					
All Member Banks	3	4½	5½	6	5

Source: Annual and Monthly Reports of Board of Governors of the Federal Reserve System.

2595

TABLE VI

Monetary Gold Stock of the United States
(At the end of each month. In Millions of Dollars)

Month	1933	1934	1935	1936
January	$4,266	$4,033	$8,391	$10,182
February	4,093	7,438(1)	8,527	10,167
March	3,995	7,694	8,567	10,184
April	4,025	7,757	8,710	10,225
May	4,028	7,779	8,858	10,402
June	4,031	7,856	9,116	10,608
July	4,033	7,931	9,144	10,648
August	4,041	7,978	9,203	10,716
September	4,037	7,978	9,368	10,845
October	4,036	8,002	9,693	11,045
November	4,036	8,132	9,920	11,184
December	4,036	8,238	10,125	11,258

Month	1937	1938	1939
January	$11,358	$12,756	$14,682
February	11,436	12,776	14,874
March	11,574	12,795	15,258
April	11,799	12,869	15,791
May	11,990	12,919	15,957
June	12,318	12,963	16,110
July	12,446	13,017	16,238
August	12,567	13,136	16,646
September	12,741	13,760	
October	12,803	14,065	
November	12,774	14,312	
December	12,760	14,512	

(1) Reduction in the weight of the gold dollar, January 31, 1934, from 25.8 grains to 15 5/21 grains, nine-tenths fine, accounts for $2,806,000,000 of the February increase over the January figure. Since January 31, 1934 the gold stock has been valued at $35 per ounce as compared with the previous rate of $20.67.

Source: Annual and Monthly Reports of the Board of Governors of the Federal Reserve System.

End of Period	Gross Debt of the United States						
	1933	1934	1935	1936	1937	1938	1939
January	$20,802[1]	$25,078	$28,476	$30,516	$34,503	$37,459	$39,641
February	20,935	26,055	28,526	30,520	34,601	37,636	39,864
March	21,362	26,158	28,824	31,459	34,732	37,560	39,990
April	21,441	26,118	28,669	31,425	34,944	37,513	40,068
May	21,853	26,155	28,639	31,636	35,216	37,424	40,282
June	22,539	27,053	28,701	33,779	36,427	37,167	40,440
July	22,610	27,189	29,123	33,444	36,719	37,194	40,661
August	23,099	27,080	29,033	33,380	37,048	37,596	
September	23,051	27,190	29,421	33,833	36,878	38,395	
October	23,050	27,188	29,462	33,833	36,959	38,426	
November	23,534	27,299	29,634	33,794	37,096	38,607	
December	23,814	28,479	30,557	34,407	37,286	39,439	

Investment of all member banks in direct obligations of the

Date	Amount
December 31, 1932	$ 6,540
June 30, 1933	6,887
October 25, 1933	6,801
December 30, 1933	7,254
March 5, 1934	8,667
June 30, 1934	9,137
October 17, 1934	9,186
December 31, 1934	9,906

Date	An
March 5, 1935	$ 9
June 29, 1935	9
November 1, 1935	10
December 31, 1935	10
March 4, 1936	10
June 30, 1936	11
December 31, 1936	11

Investments of the Federal Reserve Banks in direct obligations of the United States Government

End of Period	1933	1934	1935	1936	1937	1938	1939
January	$1,763[2]	$2,434	$2,430	$2,430	$2,430	$2,564	$2,574
February	1,866	2,432	2,430	2,430	2,430	2,564	2,564
March	1,838	2,447	2,437	2,430	2,430	2,580	2,564
April	1,837	2,431	2,430	2,430	2,525	2,564	2,571
May	1,890	2,430	2,430	2,430	2,526	2,564	2,564
June	1,998	2,432	2,433	2,430	2,526	2,564	2,551
July	2,028	2,432	2,430	2,430	2,526	2,564	2,488
August	2,129	2,432	2,432	2,430	2,526	2,564	2,426
September	2,277	2,431	2,430	2,430	2,526	2,563	
October	2,421	2,430	2,430	2,430	2,526	2,564	
November	2,432	2,430	2,430	2,430	2,564	2,564	
December	2,437	2,430	2,431	2,430	2,564	2,564	

(1) The figure for December 31, 1932 was $20,805 millions.
(2) The figure for December 31, 1932, was $ 1,855 millions

Source: For Gross Debt, Survey of Current Business. For Investments of All Member Banks in Direct Obligations of the United States Government, Annual and Monthly Reports of the Board of Governors of the Federal Reserve System. For Investments of the Federal Reserve Banks in Direct Obligations of the United States Government, Annual and Monthly Reports of the Board of Governors of the Federal Reserve System.

THE UNITED STATES

1936	1937	1938	1939
$30,516	$34,503	$37,459	$39,641
30,520	34,601	37,636	39,864
31,459	34,732	37,560	39,990
31,425	34,944	37,513	40,068
31,636	35,216	37,424	40,282
33,779	36,427	37,167	40,440
33,444	36,719	37,194	40,661
33,380	37,048	37,596	
33,833	36,878	38,395	
33,833	36,959	38,426	
33,794	37,096	38,607	
34,407	37,286	39,439	

INVESTMENT OF ALL MEMBER BANKS IN DIRECT OBLIGATIONS OF THE UNITED STATES GOVERNMENT

Date	Amount	Date	Amount	Date	Amount
December 31, 1932	$ 6,540	March 5, 1935	$ 9,821	March 31, 1937	$10,856
		June 29, 1935	9,971	June 30, 1937	10,870
June 30, 1933	6,887	November 1, 1935	10,080	December 31, 1937	10,574
October 25, 1933	6,801	December 31, 1935	10,501		
December 30, 1933	7,254			June 30, 1938	10,215
		March 4, 1936	10,564	Sept. 28, 1938	10,713
March 5, 1934	8,667	June 30, 1936	11,721	December 31, 1938	10,882
June 30, 1934	9,137	December 31, 1936	11,639		
October 17, 1934	9,186			March 29, 1939	10,691
December 31, 1934	9,906			June 30, 1939	10,946

INVESTMENTS OF THE FEDERAL RESERVE BANKS IN DIRECT OBLIGATIONS OF THE UNITED STATES GOVERNMENT

ERIOD	1933	1934	1935	1936	1937	1938	1939
	$1,763(2)	$2,434	$2,430	$2,430	$2,430	$2,564	$2,574
	1,866	2,432	2,430	2,430	2,430	2,564	2,564
	1,838	2,447	2,437	2,430	2,430	2,580	2,564
	1,837	2,431	2,430	2,430	2,525	2,564	2,571
	1,890	2,430	2,430	2,430	2,526	2,564	2,564
	1,998	2,432	2,433	2,430	2,526	2,564	2,551
	2,028	2,432	2,430	2,430	2,526	2,564	2,488
	2,129	2,432	2,432	2,430	2,526	2,564	2,426
	2,277	2,431	2,430	2,430	2,526	2,563	
	2,421	2,430	2,430	2,430	2,526	2,564	
	2,432	2,430	2,430	2,430	2,564	2,564	
	2,437	2,430	2,431	2,430	2,564	2,564	

,805 MILLIONS.
,855 MILLIONS

INESS. FOR INVESTMENTS OF ALL MEMBER BANKS IN DIRECT OBLIGATIONS OF THE UNITED STATES GOVERNMENT,
RD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM. FOR INVESTMENTS OF THE FEDERAL RESERVE BANKS IN
ES GOVERNMENT, ANNUAL AND MONTHLY REPORTS OF THE BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM.

2597 **EXHIBIT 184.**

Continental Construction Corporation
Texoma Natural Gas Company

Details of

Items of Expense in Operation of
A Single Pipe Line

from

Texas to Joliet, Illinois

and

Certain Miscellaneous Data

2598 **EXHIBIT 184.**

BEFORE THE ILLINOIS COMMERCE COMMISSION.

The Peoples Gas Light and Coke Co.
In the matter of proposed change in rates for gas service in Chicago, as stated in Rate Schedule Ill. C. C. No. 14. } No. 21170.

Exhibit 20,
Ralph W. Gallagher.

2599 **Detail of Annual Expense**

Single Line

Operation of Wells and Gathering Lines

A.	Operation of Wells—Average per year—		
	Rent and building operation	$ 8,000	
	Production Department	60,000	
	Accounting	14,000	
	Legal, including lawsuits & retainers	18,000	
	Purchasing and stores	21,000	
	Engineering Department	23,000	
	Geological Department	34,000	
	Land and Lease	14,000	
	Maintenance of Wells	160,000	
	Damages, injuries & Workmen's Compensation	8,000	
	Taxes and Insurance	67,000	
	Supplies	8,000	
	Total		$435,000
B.	Operation of Gathering Lines:		
	First Year—Pipelines and Compressor Stations—		
	Superintendent) District Supts.) Line Walkers) 20 men Meter Men) Clerks)	$ 37,500	
	Supplies and Car Expense	12,500	
	Total First Year		$ 50,000
	Fifteenth Year— Pipelines		
	Superintendent) Dist. Supts.) Line Walkers) 26 men Meter Men) Clerks)	$ 50,400	
	Supplies and Car Expense	17,000	
	Total (Pipelines)	$ 67,400	

2600	Booster Stations		
	Superintendents)		
	Station Engineers) 36 men	$ 72,000	
	Oilers)		
	Cylinder oil and operation supplies	10,600	
	Total (Booster Stations)	$82,600	
	Total Fifteenth Year		$150,000
	Average Annual Cost of operating Gathering Lines		100,000
	Total Cost of Operation of Wells and Gathering Lines		535,000

2601	Rentals, Renewals, in Lieu Payments, Dry Hole Expenses and Royalties		
	Rentals	$ 56,000	
	Renewals	35,000	
	In lieu payments	12,000	
	Dry Hole expenses	32,000	
	Royalties	176,000	
	Total		$311,000

2602	Maintenance of Gathering Lines		
A.	First Year 1½% x $4,589,000	=	$ 69,000
B.	15th year 1½% x $7,109,000	=	107,000
C.	Average for 15 years	=	88,000

2603	Operation and Maintenance of Gasoline Plant		
	Operation labor	$ 40,000	
	Operating supplies	20,000	
	Fuel, Water, and Power	66,000	
	Maintenance 2½%	19,000	
	Tank Car Rental	30,000	
	Brokerage	30,000	
	Undistributed & unforeseen	45,000	
	Total		$250,000

2604 Cost of Gas Purchased

Cost of gas at 6¢ per MCF—			$798,000
Add: Proportion of Net Revenue from Sale of Gasoline—			
Gross Revenue from Sale of Gasoline		$630,000	
Expense of Operating Gasoline Plant:			
Operating Expense	$250,000		
Amortization	51,000		
Interest	45,000		
Total Expense		346,000	
Net Revenue		$284,000	
¼ of Net Revenue to be paid for gas purchased, in addition to payments at rate of 6¢ per MCF—			71,000
Total Cost of Gas Purchased—			$869,000

2605 Operation and Maintenance of Compressor Stations

Operation of Compressor Stations			
Station Supts.) Main Engineers) Auxiliary Engineers) Utility Men)	80 men	$162,000	
Oilers (66 men)		118,800	
Cylinder oil & Operating Supplies		71,200	
Total			$352,000
Maintenance of Compressor Stations 2½% of $10,538,314 =			$263,000

2606 **Operation of Main Line**

Item	
Superintendents (14 men)	$36,000
Line Walkers (45 men)	67,500
Meter Station Employees (16 men)	27,900
Warehouse Employees (10 men)	18,000
Telephone Employees (13 men)	26,000
Rental for Leased Telephone Equipment	5,000
Automobile Expense	30,000
Sundry Supplies and Expense	27,600
Total	**$238,000**

2607 **Maintenance of Main Pipe Line and Telephone System**

1½% of $39,069,809 = $585,000.

(Above investment includes main pipeline, telephone system, interest during construction, and overhead)

2608 **Insurance and Taxes**

1½% of $55,977,123 = $840,000

(Above investment includes pipeline, compressor stations, telephone, gathering system, interest during construction, and overhead).

2609 **Administrative and other General Expenses**

Salaries and wages (100 persons)	$380,000
Traveling expense	100,000
Automobile expense of administrative personnel, including depreciation	60,000
Rent	45,000
Legal Expense, including retainers	80,000
Personal liability insurance, injuries and damages	50,000
Telephone and telegraph	25,000
Stationery and printing	30,000
Miscellaneous	30,000
Total	**$800,000**

2610 Amortization of Cost of Gas Leases and Wells

A. Gas leases were amortized at the rate of 4.3% per year which is on the basis of a 15-year sinking fund with interest compounded annually at 6%. The investment involved is $15,429,768 and the annual expense is $665,000.

B. Gas wells were all amortized by the end of the 15-year period. Wells drilled or purchased in the first year were amortized in 15 years on the sinking fund basis. Wells drilled in the 10th year were amortized in 5 years. Thus this charge varies from year to year but averages $472,000.

2611 Amortization of Investment in Gathering Lines

Total investment amortized during the fifteen year period of operation. The amount spent the first year was amortized in 15 years, on the sinking fund method compounding the interest annually at 6%. The amount spent in the 5th year was amortized in 10 years, etc. The investment changes from $4,589,000 in the first year to $7,109,000 in the fifteenth.

2612 Amortization of Investment in Gasoline Plant

This plant was amortized in 10 years, assuming a net salvage value at the end of that time of 10%. Thus the amortization rate on this plant was computed at 7.6% per year on 90% of the investment. This gives $51,000 per year.

2613 Amortization of Main Line and Compressor Stations

This was computed on a fifteen year sinking fund basis compounding the interest annually at 6%. This gives an amortization rate of 4.3% per year which is applicable to $49,608,123, resulting in an annual figure of $2,140,000.

(Above investment includes pipeline, telephone, compressor stations, interest during construction, and overhead).

2614 **Continental Construction Corporation Stock**

Amount paid in for the 1,000 outstanding shares of Continental Construction Corporation stock	$100,000.00

2615 **Cost of Drilling Wells in Texas Panhandle**

Wheeler County	$20,000
Gray County	25,000
Hutchinson County	25,000
Moore County	30,000

2616 **Detail of Auto Expense**

Average number of cars needed at one time		120	
Length of construction period		18	months
Total number of car months		2,160	
Average useful life in months		10	
Total number of cars needed		216	
Cost Per Car For Average Life			
Average cost of car equipped		$800	
Re-sale value at end of useful period		200	
Writeoff per car			$ 600
10 Months Expense per car			
Interest	$ 53		
Gasoline	400		
Oil	130		
Greasing	70		
Washing	52		
Repairs	165		
Storage	150		
License	15		
Insurance	25		
Tires	35		
			1,095
Total writeoff and expense per car			$ 1,695
Total Auto Expense			
216 cars at $1,695			$366,000

2617 Detail of Miscellaneous Expense

Note: The following are the major items in the estimate of $593,966 for miscellaneous expense.

1.	Road Markers and Signs	$ 15,000
2.	Fence Step-Overs	10,000
3.	Bridges for Line Walkers	100,000
4.	Pipe Racks	20,000
5.	Sleeve Boxes	5,000
6.	Rock, Sandbags & Brush to stop washing	100,000
7.	Cattle Guards	25,000
8.	Auxiliary River Crossings	250,000

1. Gas pipeline crossing markers are being installed at county and state highway crossings. Various signs are being erected at river crossings and other vital points.

2. In certain districts, woven wire fences make it essential that fence step-overs be installed so line walkers may follow the line.

3. Bridges for line walkers will be required across certain streams to facilitate operations.

4 & 5. Racks and boxes are being erected at frequent intervals to store pipe and emergency sleeves.

6. As the backfill seasons, additional protection is being provided at points subject to erosion.

7. The line crosses large ranches where it is necessary to cut fences and install cattle guards due to lack of roads.

8. Additional river crossing capacity is yet to be provided.

2618 STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

CERTIFICATE

Re: The Peoples Gas Light and Coke Co. In the matter of proposed change in rates for gas service in Chicago, as stated in Rate Schedule Ill. C. C. No. 14 } 21170

I, Joseph E. Knight, do hereby certify that I am Secretary of the Illinois Commerce Commission of the State of Illinois and keeper of the records of said Commission.

I further certify that the above and foregoing is a true, correct and complete copy of Exhibit 20 introduced by Mr. Ralph W. Gallagher in the above entitled cause before the Illinois Commerce Commission.

Given under my hand and the seal of said Illinois Commerce Commission at Chicago, Illinois, this 25th day of October, A. D. 1939.

Joseph E. Knight
Joseph E. Knight
Secretary

2620 EXHIBIT 185.

FEDERAL POWER COMMISSION

Rate of Return Study

Part I

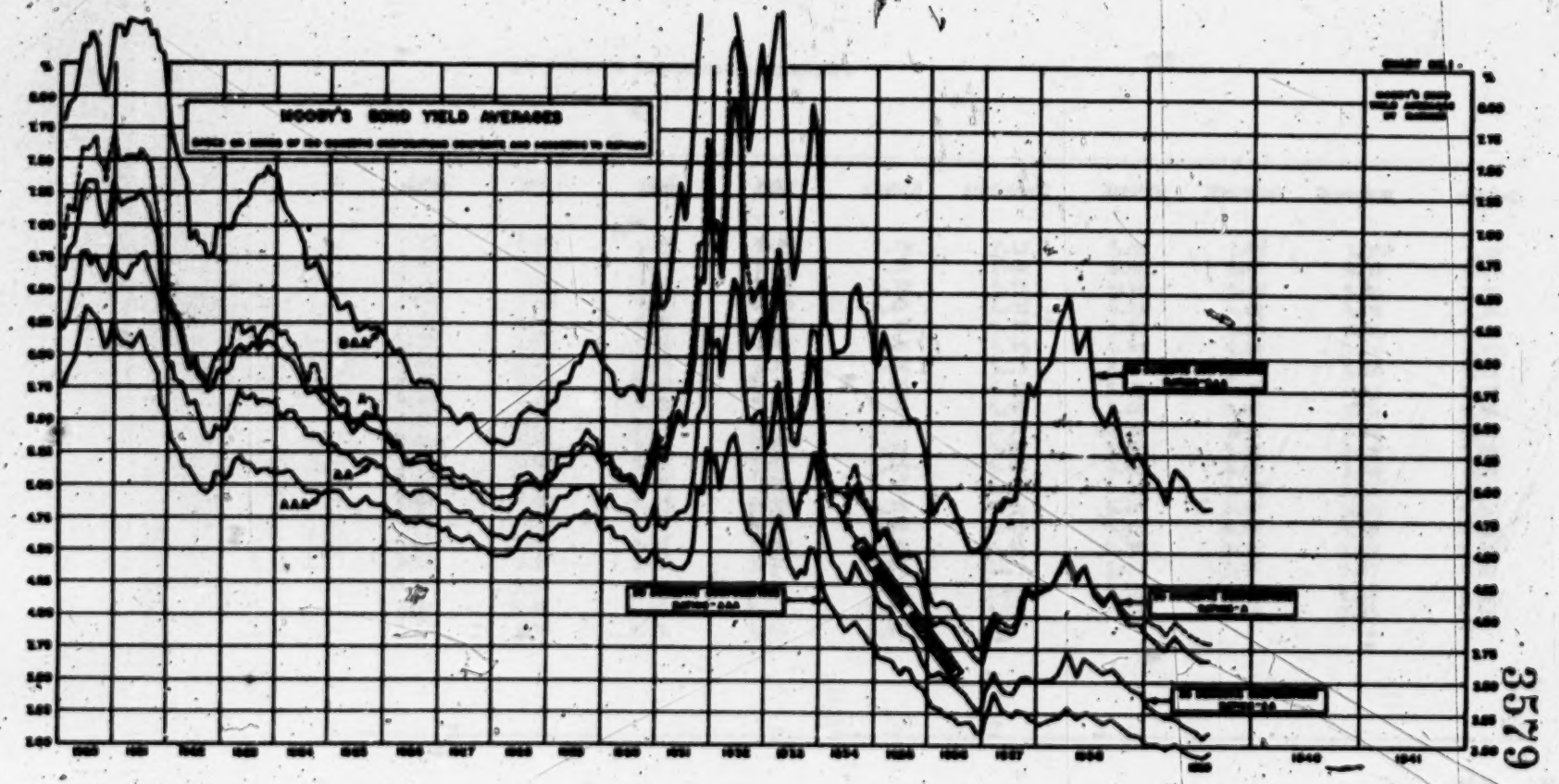
October, 1939

2621 Rate of Return Study

Table of Contents

	Chart	Schedule
General Interest Rates and Yields		
Moody's Bond Yield Averages Based on Bonds of 120 Domestic Corporations—Composite and According to Ratings	1	1
Interest Rates 4-6 Months Commercial Paper and 60-90 Day Time Loans	2	2
Yield on United States Treasury Bonds	3	3
Utility Interest Rates and Yields		
Moody's Bond Yield Averages Based on Bonds of 40 Public Utilities Accordng to Ratings	4	4
Moody's Bond Yield Averages Based on Bonds of 120 Domestic Corporations According to Groups	5	5
Average Price of New Capital—Moody's Weighted Averages of Yields on Newly Issued Domestic Bonds, Industrial, Utility (Light, Power and Gas) and Railroad	6	6
Electric Operating Utility Bonds Sold in 1935, 1936, 1937, and 1938—Yield to Purchasers	....	7
Electric Operating Utility Bonds Sold in Period from January 1, 1939 to August 31, 1939—Yield to Purchasers	....	8
Electric Operating Utility Preferred Stocks Sold in 1935, 1936, 1937 and 1938—Cost of Money to Issuing Companies and Yield to Purchasers	....	9
Electric Operating Utility Preferred Stocks Sold in Period from January 1, 1939 to August 31, 1939—Yield to Purchasers	....	10

2622 Economic Conditions		
Wholesale Commodity Price Indexes—All Commodities, Raw Materials and Finished Goods	7	11
Industrial Production, Employment and Payrolls	8	12
Carloadings, Steel Ingot Production and Building Contracts Awarded	9	13
National Income Payments	10	14
National Income Payments and Cost of Living Indexes	11	15
Comparative Risk		
Trend of Corporate Earnings—Industrials, Utilities and Railroads	12	16
Relation of Net Profit to Total Invested Capital—For Leading American Industrial, Utility and Railroad Corporations	13	17
Relation of Net Profit to Total of Property Accounts (Less Reserve) and Inventories —For Leading American Industrial, Utility and Railroad Corporations	14	18
Local Conditions		
Rediscount Rates of New York and Chicago Federal Reserve Banks	15	19
Prevailing Rates Charged Customers by Banks in Principal Cities—New York, North and East, South and West	16	20
Department Store Sales—United States and Chicago Federal Reserve District	----	21
2623		
Factory Employment and Payrolls Indexes —United States, State of Illinois, and Chicago Industrial Area	----	22
Factory Average Weekly Earnings Indexes United States and State of Illinois	----	23
Gas, Electric and Telephone Utility Companies Serving the City of Chicago—Total Operating Revenues, Years 1929-1938	----	24


MOODY'S BOND YIELD AVERAGES
AAA
AA
A
BAA

[illegible]'S GOOD YIELD ASSOCIATES

BASED ON RECORDS OF 120 DOMESTIC CORPORATIONS-COMPOSITES AND ADJUSTED TO RATINGS

YIELD: PERCENT PER ANNUM

120 DOMESTIC CORPORATIONS-COMPOSITE

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	6.65	6.81	6.86	7.02	7.26	7.29	7.29	7.[illegible]	7.12	[illegible]	7.09	[illegible]	[illegible]
1921	7.20	7.15	7.19	7.20	7.21	7.27	7.23	7.14	7.02	[illegible]	[illegible]	[illegible]	[illegible]
1922	6.35	6.24	6.17	6.01	5.89	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1923	5.87	5.90	6.03	6.09	6.06	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1924	6.01	5.98	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1925	5.60	5.58	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1926	5.34	5.29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1927	5.06	5.07	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1928	4.83	4.83	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1929	5.06	5.08	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1930	5.17	5.18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1931	5.20	5.20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1932	6.67	6.63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1933	5.98	6.13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1934	5.32	5.10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1935	4.88	4.69	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1936	4.04	3.95	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1937	3.67	3.75	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1938	4.19	4.23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1939	3.86	3.81	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

3581

EXHIBIT NO. 1
YIELD AVERAGE
COMPOSITE

BASED ON BONDS OF 100 DOMESTIC CORPORATIONS-COMPUTED AND ARRANGED BY [illegible]

UNIT: PERCENT PER ANNUM

30 DOMESTIC CORPORATIONS-RATING AAA

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	5.75	5.86	5.92	6.04	6.25	6.38	6.34	6.30	6.22	6.05	6.08	6.26	6.12
1921	6.14	6.08	6.08	6.06	6.11	6.18	6.12	5.99	5.84	5.80	5.93	5.90	5.97
1922	5.34	5.29	5.23	5.15	5.13	5.08	5.00	4.96	4.93	4.97	5.09	5.08	5.10
1923	5.04	5.07	5.18	5.22	5.16	5.15	5.14	5.08	5.12	5.11	5.09	5.09	5.12
1924	5.09	5.09	5.10	5.08	5.04	4.99	4.95	4.95	4.95	4.98	4.94	4.95	5.00
1925	4.95	4.95	4.91	4.87	4.83	4.83	4.87	4.90	4.87	4.85	4.84	4.85	4.88
1926	4.82	4.77	4.79	4.74	4.71	4.72	4.71	4.72	4.72	4.71	4.68	4.68	4.73
1927	4.66	4.67	4.69	4.58	4.57	4.58	4.60	4.55	4.54	4.53	4.49	4.46	4.57
1928	4.46	4.46	4.45	4.46	4.49	4.57	4.61	4.64	4.61	4.61	4.58	4.61	4.55
1929	4.62	4.66	4.70	4.69	4.70	4.77	4.77	4.79	4.80	4.77	4.76	4.67	4.73
1930	4.66	4.69	4.62	4.60	4.60	4.57	4.52	4.47	4.42	4.42	4.47	4.52	4.55
1931	4.42	4.43	4.38	4.40	4.37	4.35	4.36	4.40	4.35	4.38	4.24	5.32	4.58
1932	5.20	5.23	4.98	5.17	5.36	5.41	5.26	4.91	4.70	4.64	4.63	4.59	5.03
1933	4.44	4.48	4.65	4.78	4.63	4.46	4.45	4.30	4.36	4.34	4.44	4.81	4.53
1934	4.35	4.29	4.13	4.07	4.01	3.93	3.89	3.93	3.96	3.90	3.86	3.81	3.99
1935	3.77	3.69	3.67	3.66	3.65	3.61	3.52	3.60	3.59	3.52	3.47	3.44	3.60
1936	3.37	3.32	3.29	3.29	3.27	3.24	3.23	3.21	3.18	3.18	3.15	3.10	3.24
1937	3.10	3.22	3.32	3.42	3.33	3.28	3.25	3.24	3.28	3.27	3.24	3.21	3.26
1938	3.17	3.20	3.22	3.30	3.22	3.26	3.22	3.18	3.21	3.19	3.10	3.08	3.19
1939	3.01	3.01	2.99	3.02	2.97	2.92	2.89	2.93					

3583

SCHEDULE NO. 1
PAGE 7

MOODY'S BOND YIELD AVERAGES RATING AAA

EXHIBIT NO. 1
FILE 3585

MOODY'S BOND YIELD AVERAGES
BASED ON BONDS OF 100 DOMESTIC CORPORATIONS-COMPOSITE AND ACCORDING TO RATINGS

UNIT: PERCENT PER ANNUM

30 DOMESTIC CORPORATIONS-RATING AA

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	6.39	6.28	6.32	6.34	6.28	6.22	6.09	6.26	6.09	6.24	6.03	5.95	6.20
1921	6.04	6.00	6.09	6.08	6.09	6.06	6.04	6.07	6.06	6.07	6.18	6.02	6.06
1922	5.84	5.89	5.92	5.71	5.66	5.63	5.57	5.63	5.56	5.47	5.43	5.34	5.68
1923	5.58	5.58	5.57	5.56	5.49	5.45	5.39	5.45	5.35	5.36	5.34	5.32	5.46
1924	5.57	5.52	5.52	5.49	5.49	5.45	5.37	5.38	5.18	5.17	5.14	5.08	5.37
1925	5.47	5.47	5.46	5.43	5.43	5.43	5.37	5.37	5.37	5.37	5.37	5.37	5.37
1926	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41
1927	4.86	4.79	4.79	4.80	4.77	4.76	4.77	4.78	4.73	4.67	4.68	4.62	4.76
1928	4.70	4.70	4.67	4.60	4.61	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.62
1929	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58
1930	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58
1931	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58
1932	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58
1933	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58
1934	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58
1935	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58
1936	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57
1937	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30
1938	3.98	3.98	3.96	3.73	3.56	3.43	3.42	3.41	3.41	3.41	3.41	3.41	3.58
1939	3.32	3.26	3.22	3.22	3.16	3.13	3.07	3.11	3.07	3.03	3.03	3.03	3.13

3585

BASED ON BONDS OF 120 DOMESTIC CORPORATIONS, COMPUTED AND ADJUSTED TO MATURE

UNIT: PERCENT PER ANNUM

30 DOMESTIC CORPORATIONS, RATING A

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	6.88	7.15	7.11	7.34	7.60	7.56	7.62	7.69	7.48	7.51	7.48	7.42	7.42
1921	7.32	7.30	7.53	7.53	7.58	7.56	7.53	7.43	7.43	7.44	7.44	7.41	7.44
1922	6.41	6.33	6.24	6.25	6.55	5.97	5.88	5.86	5.75	5.73	5.72	5.72	5.72
1923	6.04	6.07	6.06	6.03	6.17	6.13	6.11	6.13	6.13	6.13	6.13	6.13	6.13
1924	6.16	6.18	6.10	6.03	6.08	5.90	5.84	5.83	5.83	5.83	5.83	5.83	5.83
1925	5.70	5.61	5.66	5.63	5.46	5.64	5.63	5.63	5.63	5.63	5.63	5.63	5.63
1926	5.38	5.33	5.34	5.27	5.18	5.18	5.16	5.19	5.19	5.19	5.19	5.19	5.19
1927	5.11	5.13	5.12	5.08	5.07	5.06	5.09	5.10	5.10	5.10	5.10	5.10	5.10
1928	4.91	4.92	4.98	4.91	4.96	4.97	4.96	4.97	4.98	4.98	4.98	4.98	4.98
1929	5.10	5.14	5.24	5.13	5.26	5.27	5.28	5.28	5.28	5.28	5.28	5.28	5.28
1930	5.23	5.25	5.15	5.12	5.07	5.08	5.06	5.06	5.06	5.06	5.06	5.06	5.06
1931	5.28	5.29	5.30	5.28	5.25	5.25	5.19	5.19	5.19	5.19	5.19	5.19	5.19
1932	7.06	7.08	6.80	7.08	8.10	8.08	8.06	8.05	8.05	8.05	8.05	8.05	8.05
1933	6.16	6.30	6.04	6.65	6.47	6.46	6.46	6.46	6.46	6.46	6.46	6.46	6.46
1934	5.72	5.84	5.12	5.07	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96
1935	4.74	4.63	4.67	4.69	4.59	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58
1936	4.21	4.12	4.10	4.12	4.11	4.09	4.09	3.99	3.98	3.98	3.98	3.98	4.04
1937	3.77	3.85	3.97	4.04	3.95	3.96	3.96	3.94	4.02	4.16	4.16	4.16	3.98
1938	4.20	4.24	4.34	4.19	4.28	4.21	4.21	4.13	4.20	4.08	4.08	4.08	4.19
1939	3.97	3.94	3.87	3.97	3.92	3.86	3.83	3.80					

SCHEDULE NO. 1
PAGE 1
ACCOUNT 1 NOTE
FIELD AUDITOR
DATE 7

3587

BASED ON BONDS OF 120 DOMESTIC CORPORATIONS--COMPOSITE AND ACCORDING TO RATINGS

UNIT: PERCENT PER ANNUM

30 DOMESTIC CORPORATIONS--RATING Baa

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	7.[illegible]	7.[illegible]	7.97	8.17	8.[illegible]	8.[illegible]	8.[illegible]	8.[illegible]	8.[illegible]	7.[illegible]	8.11	[illegible]	8.[illegible]
1921	8.[illegible]	8.[illegible]	8.[illegible]	8.[illegible]	8.[illegible]	8.[illegible]	8.[illegible]	8.[illegible]	8.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]
1922	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]
1923	6.[illegible]	6.[illegible]	6.[illegible]	7.[illegible]	6.[illegible]	6.[illegible]	6.[illegible]	6.[illegible]	6.[illegible]	6.[illegible]	6.[illegible]	6.[illegible]	6.[illegible]
1924	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]
1925	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]
1926	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]
1927	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]
1928	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]
1929	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]
1930	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]	5.[illegible]
1931	9.[illegible]	8.[illegible]	8.[illegible]	10.[illegible]	11.[illegible]	11.[illegible]	10.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1932	8.[illegible]	8.[illegible]	8.[illegible]	[illegible]	7.[illegible]	7.[illegible]	6.[illegible]	6.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]	7.[illegible]
1933	7.01	6.37	6.26	6.13	5.94	5.77	5.87	5.98	5.57	5.52	5.45	5.30	5.80
1934	5.58	5.55	6.20	4.91	4.96	4.90	4.84	4.74	4.62	4.54	4.52	4.53	4.77
1935	5.00	4.80	4.86	4.86	4.86	4.93	4.91	4.92	5.16	5.52	5.82	5.73	5.03
1936	4.49	4.53	4.66	4.47	4.06	4.85	4.63	4.49	5.65	5.36	5.23	5.27	5.00
1937	5.09	5.97	6.30	5.15	5.07	4.91	4.86	4.85					
1938	5.12	5.05	4.89										
1939													

Source of data: Moody's Bond Yield Averages are computed by Moody's Investors Service and are issued in their publications. The Bond Yield Averages are reproduced in Survey of Current Business, November 1937, 1938 Supplement, and March 1939. The above figures were taken from the last named source for the period from January 1920 to January 1939; and were taken direct from Moody's Bond Survey for the subsequent months.

2630 Compilation of Moody's Bond Yield Averages.

In the compilation of Moody's Bond Yield Averages, daily yields for each individual bond are computed on the basis of closing prices. Unweighted arithmetic averages are computed to obtain each of the series shown. The monthly series are arithmetic averages of the daily figures.

Occasional substitutions in the bond list have been made when ratings have been changed, when a bond is called, when a bond sells too far above its call price, or because of approaching maturity. Suitable adjustments (usually small), which are gradually amortized, are introduced to prevent such substitutions from impairing the comparability of the series. No convertible or other unusual issues are included and the average maturity is close to [illegible] years.

Only 60 bonds were used in the averages from 1920 to 1927, inclusive. From 1928 to 1933, inclusive 120 bonds were used, no adjustment being required to connect the two series. Since 1933, it has not been possible to find a sufficient number of representative bonds for the Industrial AAA and AA groups; they contain, respectively, 4 and 3 issues. However, the averages for these groups are given equal weighting in combining them with other group averages.

Key to Moody's Bond Ratings.

Moody's Ratings are an indicator of the relative investment quality of bonds.

The Ratings are defined by Moody's Investors Service as follows:

AAA

Bonds carrying the AAA rating represent the highest type of bond investment. Principal and interest are protected by characteristically wide margins, the fluctuation in which is not at all likely to jeopardize the security. Among all rating groups, these bonds hold the best prospect of unchanging quality.

2631 **AA**

Bonds carrying the AA rating rank high by reason of asset and income protection but they lack one characteristic or another of the highest type of bond investment.

A

Bonds carrying the A rating are well within the sound investment classification. Security of principal and interest may be regarded as adequate but the borrower's position is subject to greater fluctuation or the bonds are more vulnerable to such fluctuation than in the case of the first two classes.

BAA

Bonds carrying the BAA rating comprise that large group of investments which are neither very good nor very bad. In this classification some speculative elements exist. The extent and stability of income and security may be satisfactory but certainly not noteworthy.

Source of definition of Ratings: Moody's Public Utilities, 1938, page viii.

2632 **Bonds Used in Moody's Bond Yield Averages According to Ratings**

Rating Aaa

Industrials

Liggett & Myers 5s, 1951
Socony-Vacuum 3s, 1964
Standard Oil N. J. 3s, 1961
Texas Corp. 3s, 1959

Public Utilities

Brooklyn Edison 3½s, 1966
Cincinnati Gas & Elec. 3½s, 1966
Cons. Gas E. L. & P., Balto. 3s, 1969
Duquesne Light 3½s, 1965
Illinois Bell Tel. 3½s, 1970
New York Edison 3½s, 1965
Pacific Tel. & Tel. "B" 3½s, 1966
Philadelphia Electric 3½s, 1967
Southwestern Bell 3s, 1968
West Penn Power 3½s, 1966

Railroads

Chesapeake & Ohio 4½s, 1992
Cincinnati Union Term. 3⅜s, 1969
Hocking Valley 4½s, 1999
Norfolk & Western 4s, 1996
Union Pacific 4s, 2008

Note—Because of the limited number of suitable issues, the Industrial Aaa group now temporarily consists of four issues, and the Railroad Aaa group of five issues.

Source—The Commercial and Financial Chronicle, August 19, 1939.

2633 Rating Aa

Industrials

Lorillard Co. 5s, 1951
Shell Union Oil 2½s, 1954
Swift & Co. 3¾s, 1950

Public Utilities

American Tel. & Tel. 3½s, 1961
Atlantic City Electric 3½s, 1964
Commonwealth Edison 3½s, 1968
Consolidated Edison N. Y. 3½s, 1956
Detroit Edison 3½s, 1966
Louisville Gas & Elec. 3½s, 1966
Ohio Power 3½s, 1968
Pacific Gas & Elec. 3¾s, 1961
Southern Calif. Edison ref. 3¾s, 1960
Virginia El. & Pr. 3½s, 1968

Railroads

Atch. Topeka & Santa Fe gen. 4s, 1995
Chesapeake & Ohio "D" 3½s, 1996
Chicago Lake Shore & East. 4½s, 1969
Chicago Union Station 3¾s, 1963
Duluth Missabe & Iron Range 3½s, 1962
Monongahela Ry. 4s, 1960
Oregon-Wash. R. R. & Nav. 4s, 1961
Pennsylvania 4½s, 1960
Union Pacific 3½s, 1971
Virginian Ry. 3¾s, 1966

Note—Because of the limited number of suitable issues, the Industrial Aa group now temporarily consists of three issues.

2634 **Rating A**

Industrials

Bethlehem Steel 3¾s, 1966
Crane Co. 3½s, 1951
Fairbanks Morse 4s, 1956
Inland Steel 3¾s, 1961
Koppers Co. 4s, 1951
National Steel 3s, 1965
Tide Water Assoc. Oil 3½s, 1952
Youngstown Sheet & Tube 4s, 1961

Public Utilities

Central Illinois Pub. Serv. 3¾s, 1968
Central Maine Power 3½s, 1966
Gulf States Utilities 3½s, 1969
Indianapolis Power & Light 3¾s, 1968
Lake Superior Dist. Pr. 3½s, 1966
Montana Power 3¾s, 1966
Ohio Edison 3¾s, 1972
Pennsylvania Pr. & Lt. 3½s, 1969
Sioux City Gas & Elec. 4s, 1966
Wisconsin Public Service 4s, 1961

Railroads

Atch. Topeka & S. Fe. R. M. div. 4s, 1965
Chicago & Western Indiana 4s, 1952
Great Northern 4½s, 1961
Lexington & Eastern 5s, 1965
N. Y. Connecting RR 4½s, 1953
Northern Central Ry. 4½s, 1974
Pennsylvania 4½s, 1984
Piedmont & Northern 3¾s, 1966
Pgh. Cin. Chic. & St. L. 5s, 1975
Texas & Pacific 1st. 5s, 2000

Note—Because of the limited number of suitable issues, the Industrial A group now temporarily consists of eight issues.

2635 **Rating Baa**

Industrials

Anaconda Copper 4¼s, 1950
Armour Co. of Del. 4s, 1955
Crown Cork & Seal 4s, 1950
Goodrich (B. F.) 4½s, 1956
Jones & Laughlin 4½s, 1961
McCroy Stores 5s, 1951
Republic Steel 4½s, 1961
Revere Copper & Brass 4½s, 1956
Wheeling Steel 4½s, 1966
Wilson & Co. 4s, 1955

Public Utilities

Arkansas Pr. & Lt. 5s, 1956
Carolina Pr. & Lt. 5s, 1956
Illinois Pr. & Lt. 5s, 1956
Iowa-Nebraska Lt. & Pr. 5s, 1957
Minnesota Pr. & Lt. 4½s, 1978
New Orleans Pub. Serv. 5s, 1955
Northern Indiana Pub. Serv. 4½s, 1970
Penn Central Lt. & Pr. 4½s, 1977
Peoples Gas Light & Coke 4s, 1981
Wisconsin Pr. & Lt. 4s, 1966

Railroads

Atlantic Coast Line 4s, 1952
Chicago Burl. & Quincy 4½s, 1977
Great Northern 4½s, 1976
Louisiana & Nashville 3¾s, 2003
Louisville & Nashville 3¾s, 2003
Northern Pacific 4s, 1997
Pennsylvania 4½s, 1970
Reading "A" 4½s, 1997
Texas & Pacific 5s, 1980
Western Maryland 4s, 1952

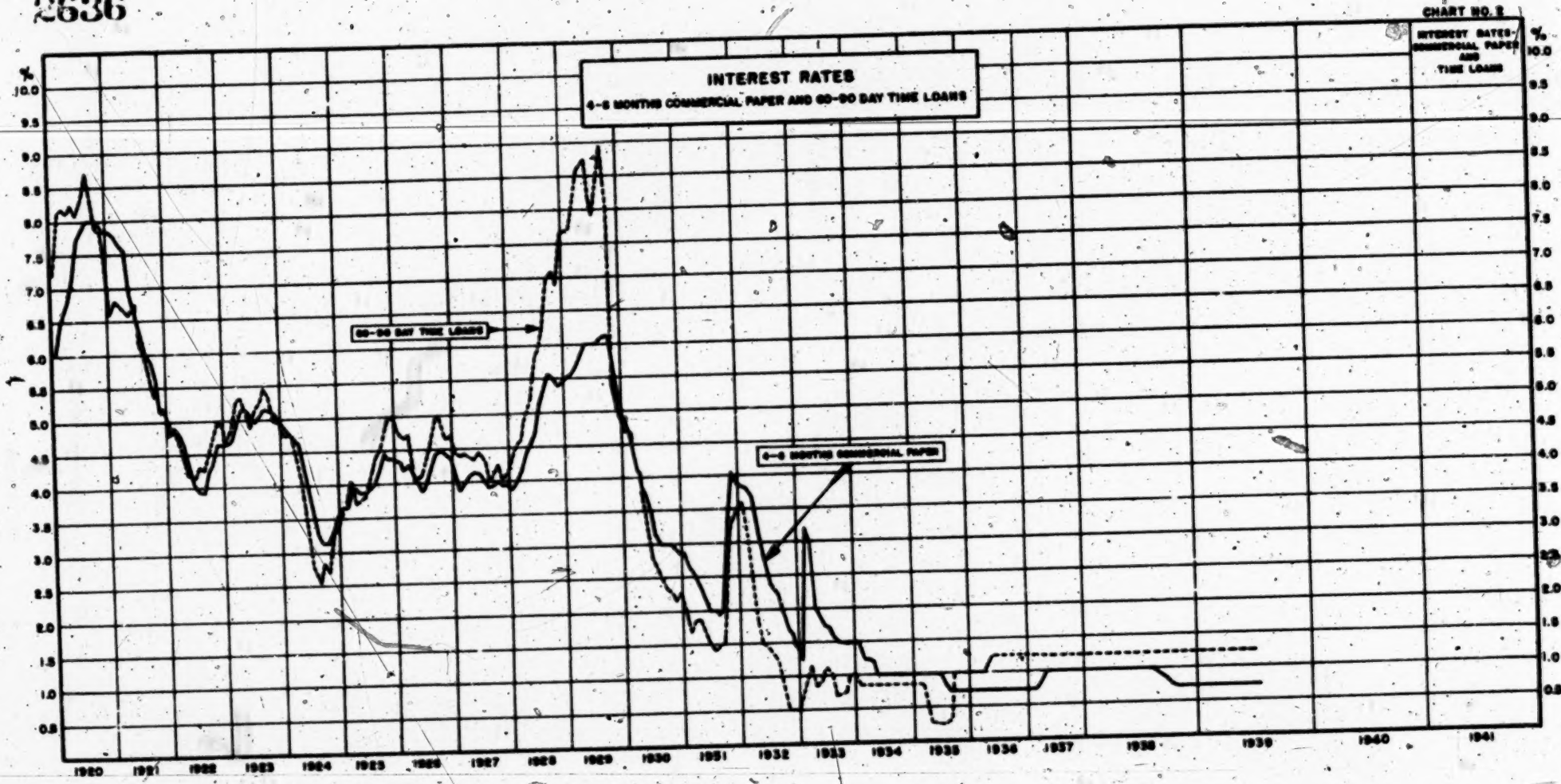


CHART NO. 2
INTEREST RATES-COMMERCIAL PAPER AND TIME LOANS
INTEREST RATES
4-6 MONTHS COMMERCIAL PAPER AND 60-90 DAY TIME LOANS
60-90 DAY TIME LOANS
4-6 MONTHS COMMERCIAL PAPER
%
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941

4-6 MONTHS COMMERCIAL PAPER AND 60-90 DAY TIME LOANS

UNIT: PERCENT

4-6 MONTHS COMMERCIAL PAPER

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	6.00	6.41	6.68	6.81	7.16	7.25	7.25	8.00	8.00	8.00	7.50	7.00	7.15
1921	7.00	7.75	7.63	7.00	6.88	6.63	6.38	6.38	6.38	6.38	6.38	6.38	6.75
1922	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38
1923	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38
1924	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38
1925	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38
1926	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38
1927	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13
1928	4.88	4.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
1929	5.15	5.25	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38	5.38
1930	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38
1931	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38
1932	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38
1933	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
1934	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
1935	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
1936	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
1937	0.75	0.75	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.94
1938	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.78	0.75	0.75	0.93
1939	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	0.88

Source of data: Standard Trade and Securities (Published by Standard Statistics Company, Inc.) Volume 3, page A-26, dated January 21, 1938, and Current Statistics Section. The following explanation was furnished with the interest rates - "From 1890 to date the data here been computed by the Standard Statistics Co. from data appearing in the Commercial and Financial Chronicle. Data earlier than March 1924 are for 60-90 day commercial paper. At this time rates for both maturities were practically identical. July 1930, a change was made to extra choice from choice, double name on the latter became inactive."

3369

SCHEDULE NO. 8
PAGE 1

4-6 MONTHS COMMERCIAL PAPER

INTEREST RATES

4-6 MONTHS COMMERCIAL PAPER AND 60-90 DAY TIME LOANS

UNIT: PERCENT

60-90 DAY TIME LOANS

Year	January	February	March	April	May	June	July	Annual	September	October	November	December	Average
1920	7.25	6.13	6.19	6.10	6.25	6.06	6.25	6.72	6.41	7.69	7.85	7.30	6.8
1921	6.50	6.61	6.75	6.68	6.60	6.75	6.20	6.00	5.65	5.38	5.19	5.13	6.14
1922	4.75	4.85	4.74	4.41	4.19	4.13	4.30	4.82	4.96	5.12	5.08	4.95	4.88
1923	4.75	4.85	5.23	5.31	5.11	4.88	5.13	5.25	5.46	5.51	5.39	4.95	5.12
1924	4.75	4.72	4.67	4.31	3.94	3.26	2.75	2.52	2.61	2.58	2.21	2.48	3.58
1925	3.25	3.66	3.88	3.63	3.63	3.96	3.96	4.08	4.15	4.33	4.38	4.38	3.90
1926	4.75	4.63	4.72	4.19	4.03	4.13	4.38	4.67	4.93	4.93	4.88	4.15	4.57
1927	4.57	4.38	4.20	4.36	4.31	4.36	4.36	4.38	4.11	4.35	4.63	4.56	4.37
1928	4.75	4.81	4.81	4.93	5.19	5.75	5.94	5.30	4.97	7.89	6.88	7.63	5.46
1929	7.50	7.58	8.00	8.00	8.70	8.15	7.90	8.08	8.06	7.88	5.44	5.44	7.77
1930	4.70	4.88	4.16	3.83	3.41	2.88	2.68	2.90	2.66	2.38	2.16	2.88	3.19
1931	2.67	1.66	1.88	1.88	1.66	1.50	1.40	1.43	1.50	2.88	3.38	3.38	2.15
1932	3.68	3.63	3.13	2.38	1.63	1.63	1.43	1.38	1.47	0.90	0.91	0.88	1.73
1933	0.90	0.78	2.91	1.18	0.96	0.90	1.11	1.05	0.88	0.63	0.77	1.04	1.00
1934	1.00	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
1935	0.88	0.88	0.88	0.61	0.27	0.25	0.25	0.25	0.31	1.00	1.00	1.00	0.57
1936	1.00	1.00	1.00	1.00	1.17	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.16
1937	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
1938	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
1939	1.25	1.25	1.25	1.25	1.25	1.25	1.25						

Source of data: Standard Trade and Securities (Published by Standard Statistics Company, Inc.) Volume 1, page A-25, dated January 21, 1938, and Current Statistics Section. The following note was furnished with the interest rates - "The above interest rates are averages by The Standard Statistics Co. from rates quoted weekly in The Commercial and Financial Chronicle."

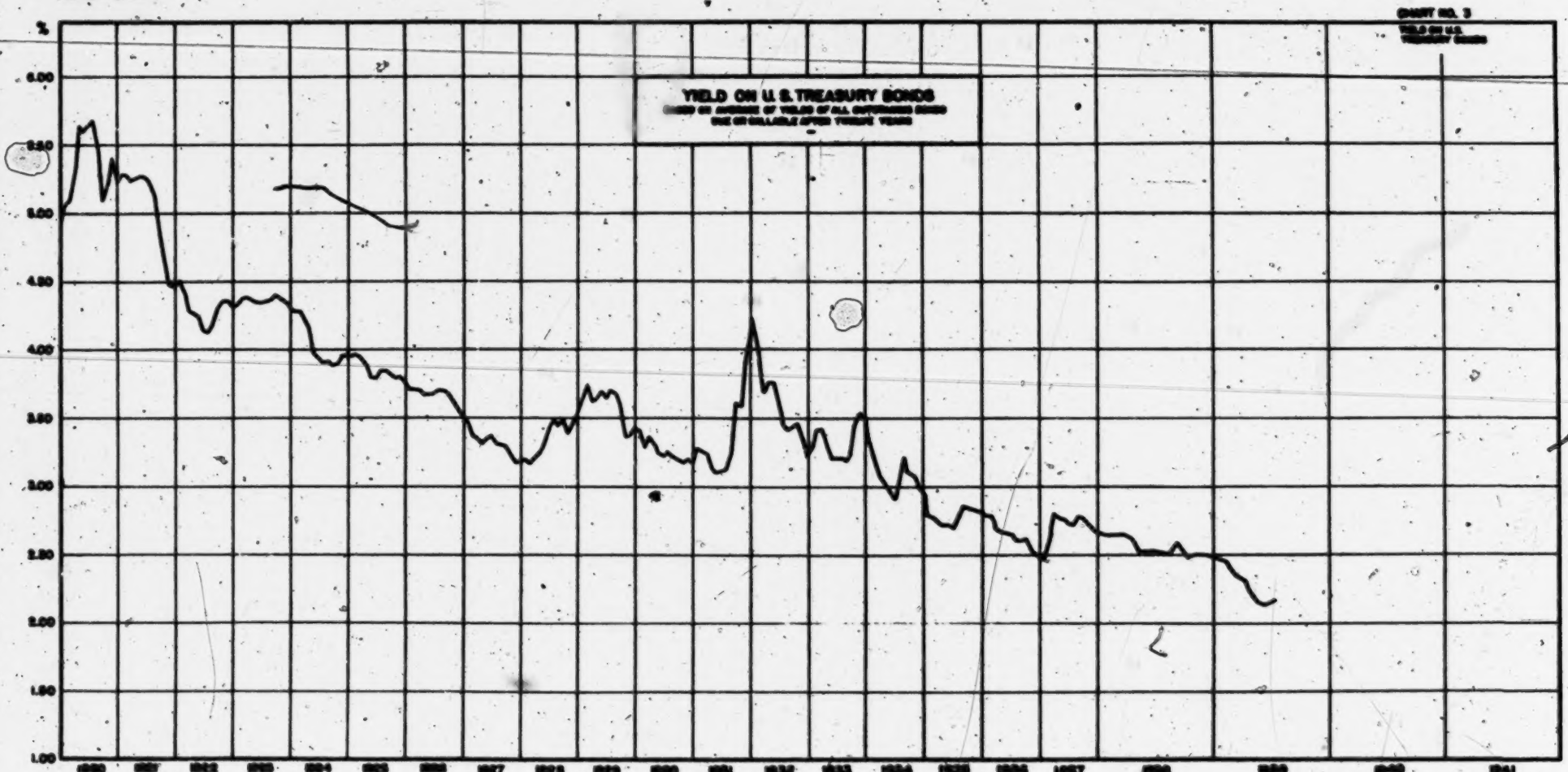
3601

SCHEDULE NO. 8
PAGE 2

INTEREST RATES-
60-90 DAY TIME
LOANS

5

2639



YIELD ON UNITED STATES TREASURY BONDS

BASED ON AVERAGE OF YIELDS OF ALL OUTSTANDING BONDS DUE OR CALLABLE AFTER TWELVE YEARS

UNIT: PERCENT PER ANNUM

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	4.93	5.05	5.09	5.28	5.58	5.53	5.57	5.67	5.44	5.08	5.21	5.80	5.32
1921	5.23	5.28	5.27	5.24	5.27	5.27	5.26	5.22	5.12	4.83	4.96	4.47	5.09
1922	4.45	4.50	4.42	4.28	4.26	4.24	4.14	4.12	4.19	4.30	4.36	4.35	4.36
1923	4.32	4.33	4.38	4.39	4.37	4.34	4.34	4.35	4.36	4.40	4.37	4.35	4.36
1924	4.30	4.28	4.28	4.23	4.15	3.98	3.94	3.91	3.92	3.87	3.90	3.96	3.96
1925	3.96	3.95	3.96	3.93	3.87	3.79	3.79	3.85	3.85	3.82	3.79	3.80	3.86
1926	3.77	3.71	3.71	3.70	3.67	3.67	3.68	3.70	3.70	3.68	3.62	3.96	3.74
1927	3.51	3.48	3.37	3.35	3.31	3.34	3.36	3.32	3.30	3.29	3.23	3.17	3.34
1928	3.18	3.19	3.17	3.20	3.24	3.29	3.42	3.49	3.46	3.46	3.39	3.46	3.33
1929	3.52	3.62	3.74	3.63	3.64	3.69	3.64	3.70	3.68	3.60	3.36	3.37	3.60
1930	3.43	3.41	3.29	3.37	3.31	3.25	3.25	3.26	3.24	3.21	3.19	3.22	3.29
1931	3.20	3.30	3.27	3.26	3.16	3.13	3.15	3.18	3.25	3.63	3.63	3.93	3.54
1932	4.26	4.11	3.92	3.64	3.76	3.76	3.58	3.45	3.42	3.43	3.45	3.95	3.51
1933	3.22	3.31	3.42	3.42	3.39	3.21	3.20	3.21	3.19	3.22	3.46	3.53	3.12
1934	3.50	3.32	3.20	3.11	3.02	2.98	2.92	3.03	3.20	3.10	3.07	3.01	2.85
1935	2.88	2.79	2.77	2.74	2.72	2.72	2.69	2.76	2.83	2.83	2.83	2.83	2.78
1936	2.80	2.77	2.71	2.68	2.66	2.66	2.65	2.61	2.60	2.62	2.53	2.51	2.68
1937	2.47	2.46	2.60	2.80	2.76	2.76	2.72	2.72	2.77	2.76	2.71	2.67	2.56
1938	2.65	2.64	2.64	2.62	2.51	2.52	2.52	2.51	2.58	2.48	2.50	2.49	2.56
1939	2.47	2.44	2.34	2.30	2.17	2.13	2.16						

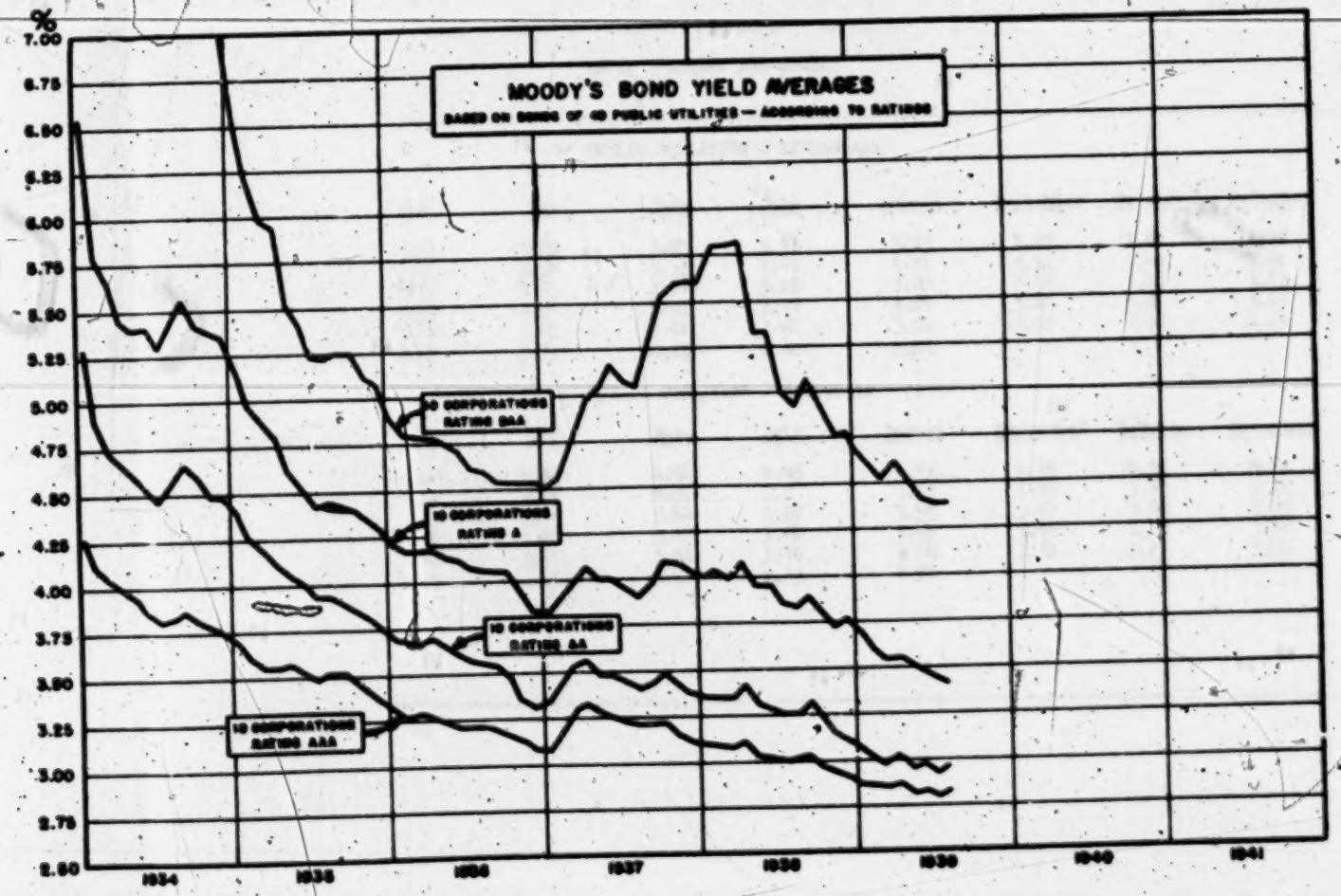
Source of data: The computations were made by the U.S. Treasury Department and represent monthly data which are averages of daily figures. Beginning January 1926, average yields are based on all outstanding Treasury bonds not due or callable for 12 years or more. Earlier figures are for Treasury bonds not due or callable for 8 years or more, together with certain Liberty Loan issues. The yields are published in the Survey of Current Business from which the above figures were taken.

3605

SCHEDULE NO. 3

YIELD ON U.S. TREASURY BONDS

CHART NO. 4
MOODY'S BOND YIELD AVERAGES PUBLIC UTILITIES BY RATINGS



MOODY'S BOND YIELD AVERAGES

BASED ON BONDS OF 40 PUBLIC UTILITIES - ACCORDING TO RATINGS

UNIT: PERCENT PER ANNUM

10 PUBLIC UTILITIES - RATING AAA

Year	January	February	March	April	May	June	July	August	September	October	November	December	AVERAGE
1934	4.25	4.10	4.03	3.97	3.93	3.83	3.81	3.83	3.87	3.88	3.78	3.76	3.98
1935	3.89	3.81	3.93	3.93	3.98	3.93	3.87	3.91	3.91	3.88	3.91	3.87	3.91
1936	3.90	3.86	3.88	3.88	3.83	3.81	3.79	3.80	3.78	3.76	3.73	3.71	3.81
1937	3.07	3.16	3.28	3.33	3.28	3.25	3.22	3.20	3.21	3.21	3.15	3.12	3.21
1938	3.10	3.09	3.08	3.10	3.03	3.02	3.01	3.01	3.02	2.98	2.96	2.92	3.03
1939	2.87	2.87	2.86	2.87	2.83	2.83	2.80	2.83					

10 PUBLIC UTILITIES - RATING AA

Year	January	February	March	April	May	June	July	August	September	October	November	December	AVERAGE
1934	5.29	4.88	4.73	4.66	4.60	4.52	4.46	4.45	4.45	4.38	4.29	4.26	4.66
1935	4.18	4.26	4.19	4.11	4.05	4.00	3.93	3.93	3.98	3.92	3.92	3.87	4.02
1936	3.70	3.68	3.67	3.69	3.65	3.60	3.57	3.55	3.53	3.48	3.51	3.51	3.59
1937	3.33	3.43	3.53	3.62	3.48	3.47	3.48	3.46	3.43	3.43	3.34	3.30	3.44
1938	3.35	3.35	3.36	3.42	3.31	3.28	3.26	3.26	3.31	3.23	3.14	3.10	3.29
1939	3.05	3.01	2.99	3.01	2.96	2.97	2.93	2.97					

3609

SCHEDULE NO. 4
PAGE 1

MOODY'S BOND YIELD AVERAGES BASED ON BONDS OF 40 PUBLIC UTILITIES IN RATINGS

MOODY'S BOND YIELD AVERAGES

BASED ON BONDS OF 30 PUBLIC UTILITIES, ACCORDING TO RATINGS

UNIT: PERCENT PER ANNUM

30 PUBLIC UTILITIES - RATING A

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1934	4.56	4.78	4.66	4.48	4.38	4.38	4.28	4.23	4.26	4.18	4.12	4.06	4.34
1935	4.18	4.26	4.28	4.19	4.22	4.13	4.18	4.23	4.17	4.18	4.22	4.18	4.21
1936	4.21	4.17	4.17	4.17	4.14	4.12	4.07	4.06	4.03	4.04	4.02	4.02	4.09
1937	4.02	4.03	4.08	4.07	4.00	3.99	3.96	3.96	3.98	4.03	4.05	4.03	4.02
1938	4.01	4.03	3.98	4.00	3.93	3.92	3.90	3.91	3.88	3.79	3.73	3.74	3.91
1939	3.68	3.59	3.56	3.55	3.50	3.47	3.45	3.41					3.50

30 PUBLIC UTILITIES - RATING BAA

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1934	8.86	7.98	7.98	7.16	7.17	7.20	7.36	7.66	7.68	7.38	7.21	7.03	7.4
1935	6.69	6.80	6.78	6.77	6.76	6.72	6.68	6.72	6.66	6.62	6.62	6.57	6.69
1936	6.58	6.58	6.76	6.77	6.76	6.72	6.68	6.68	6.66	6.53	6.53	6.53	6.66
1937	6.50	6.55	6.76	6.98	6.82	6.17	6.08	6.08	6.06	6.06	6.06	6.06	6.38
1938	6.38	6.39	6.80	6.88	6.78	6.33	6.08	6.03	6.05	6.06	6.77	6.77	6.47
1939	6.26	6.09	6.53	6.62	6.58	6.48	6.38	6.38					6.48

Source of data: Moody's Bond Yield Averages for Public Utilities are computed by Moody's Investors Service and are issued in their publications. The above figures were taken from Moody's Bond Survey, October 5, 1936 supplement, for the period from January 1934 to September 1936, inclusive, and were taken from later supplements to Moody's Bond Survey for subsequent months.

MOODY'S BOND YIELD AVERAGES BASED ON BONDS OF 30 PUBLIC UTILITIES ACCORDING TO RATINGS

Aaa

Brooklyn Edison 3¼s, 1966
Cincinnati Gas & Elec. 3¼s, 1966 (holding Co.)
Cons. Gas. E. L. & P., Balto. 3s, 1969
Duquesne Light 3¼s, 1965
Illinois Bell Tel. 3¼s, 1970
New York Edison 3¼s, 1965
Pacific Tel. & Tel. "B" 3¼s, 1966
Philadelphia Electric 3⅛s, 1967
Southwestern Bell 3s, 1968
West Penn Power 3¼s, 1966

Aa

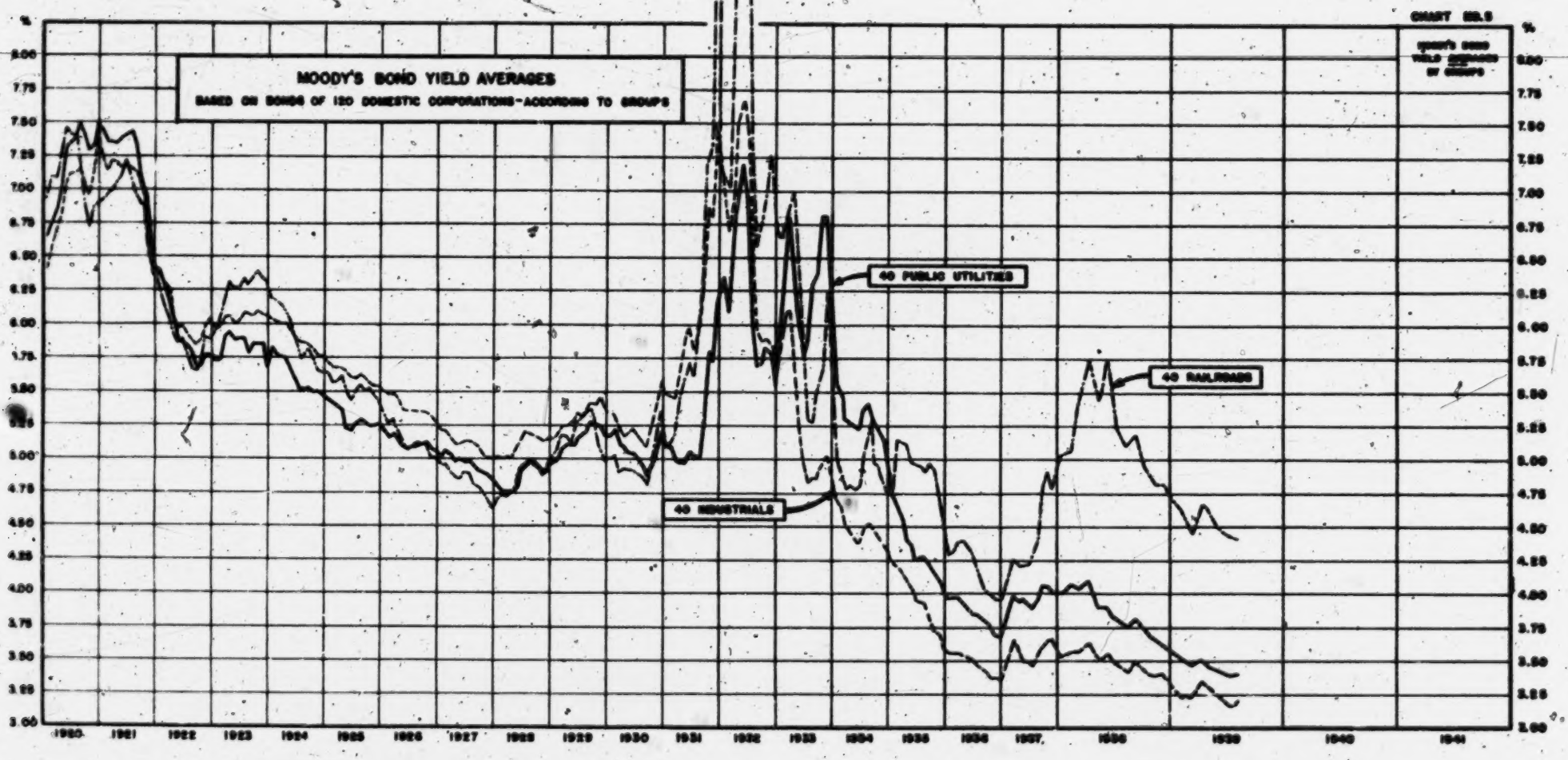
American Tel. & Tel. 3¼s, 1961
Atlantic City Elec. 3¼s, 1964
Commonwealth Edison 3⅛s, 1968
Consolidated Edison N. Y. 3⅛s, 1956
Detroit Edison 3⅛s, 1966
Louisville Gas & Elec. 3¼s, 1966
Ohio Power 3¼s, 1968
Pacific Gas & Elec. 3⅜s, 1961
Southern Calif. Edison ref. 3⅜s, 1960
Virginia El. & Pr. 3⅛s, 1968

A

Central Illinois Pub. Serv. 3⅜s, 1968
Central Maine Power 3¼s, 1966
Gulf States Utilities 3⅛s, 1969
Indianapolis P. & L. 3⅜s, 1968
Lake Superior Dist. Pr. 3⅛s, 1966
Montana Power 3⅜s, 1966
Ohio Edison 3⅜s, 1972
Pennsylvania Pr. & Lt. 3⅜s, 1969
Sioux City Gas & Elec. 4s, 1966
Wisconsin Pub. Serv. 4s, 1961

Baa

Arkansas Pr. & Lt. 5s, 1956
Carolina Pr. & Lt. 5s, 1956
Illinois Pr. & Lt. 5s, 1956
Iowa-Nebraska Lt. & Pr. 5s, 1957
Minnesota Pr. & Lt. 4½s, 1978
New Orleans Pub. Serv. 5s, 1955
Northern Indiana Pub. Serv. 4½s, 1970
Penn. Central Lt. & Pr. 4½s, 1977
Peoples Gas Light & Coke 4s, 1981
Wisconsin Pr. & Lt. 4s, 1966


MOODY'S BOND YIELD AVERAGES
BASED ON BONDS OF 150 DOMESTIC CORPORATIONS - ACCORDING TO GROUPS
40 PUBLIC UTILITIES
40 RAILROADS
40 INDUSTRIALS
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941

BASED ON BONDS OF 120 DOMESTIC CORPORATIONS-ACCORDING TO GROUPS

UNIT: PERCENT PER ANNUM

40 INDUSTRIALS

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	6.39	6.57	6.66	6.78	7.01	7.11	7.12	7.15	7.05	6.97	7.11	7.38	6.94
1921	7.47	7.14	7.22	7.21	7.16	7.19	7.17	7.13	7.06	6.93	6.61	6.36	7.06
1922	6.37	6.31	6.25	6.08	5.96	5.99	5.91	5.88	5.79	5.88	5.98	6.07	6.06
1923	5.95	5.97	6.06	6.05	5.99	6.01	6.07	6.07	6.05	6.10	6.07	6.08	6.04
1924	6.03	6.01	6.00	6.00	5.94	5.89	5.86	5.86	5.84	5.81	5.74	5.75	5.89
1925	5.72	5.66	5.68	5.66	5.68	5.59	5.58	5.61	5.59	5.54	5.54	5.53	5.62
1926	5.49	5.46	5.48	5.43	5.35	5.34	5.33	5.34	5.34	5.33	5.32	5.28	5.37
1927	5.21	5.20	5.15	5.10	5.10	5.11	5.12	5.10	5.07	5.02	5.01	5.00	5.10
1928	5.01	5.00	5.01	5.00	5.07	5.14	5.19	5.18	5.16	5.14	5.13	5.15	5.10
1929	5.14	5.18	5.24	5.24	5.27	5.34	5.32	5.34	5.32	5.40	5.43	5.48	5.33
1930	5.36	5.32	5.23	5.16	5.17	5.21	5.17	5.12	5.08	5.04	5.37	5.38	5.21
1931	5.41	5.40	5.44	5.65	5.89	5.97	5.79	5.93	6.33	6.86	6.79	7.85	6.08
1932	7.20	7.08	6.71	7.08	7.55	7.66	7.40	6.37	5.96	5.89	5.90	5.65	6.74
1933	5.66	5.83	6.10	6.10	5.60	5.21	4.95	4.84	4.67	4.67	4.80	4.57	5.28
1934	4.87	4.73	4.65	4.53	4.47	4.41	4.39	4.47	4.32	4.47	4.47	4.37	4.52
1935	4.31	4.24	4.20	4.18	4.11	4.07	3.95	3.94	3.91	3.83	3.73	3.71	4.02
1936	3.99	3.97	3.96	3.97	3.95	3.94	3.92	3.88	3.86	3.82	3.77	3.77	3.93
1937	3.96	3.98	3.98	3.95	3.95	3.91	3.90	3.87	3.85	3.83	3.85	3.84	3.90
1938	3.94	3.87	3.88	3.84	3.81	3.85	3.88	3.83	3.80	3.83	3.89	3.80	3.90
1939	3.81	3.89	3.89	3.85	3.80	3.83	3.87	3.81					

SCHEDULE NO. 5
PAGE 1

MOODY'S BOND YIELD AVERAGES INDUSTRIALS

3617

6

BASED ON BONDS OF 120 DOMESTIC CORPORATIONS--ACCORDING TO GROUPS

UNIT: PER CENT PER ANNUM

NO PUBLIC UTILITIES

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	6.63	6.76	6.83	7.03	7.30	7.35	7.37	7.45	7.48	7.53	7.56	7.52	7.23
1921	7.43	7.35	7.20	7.34	7.36	7.36	7.42	7.44	7.45	7.45	7.45	7.45	7.41
1922	6.40	6.31	6.20	6.05	5.87	5.67	5.63	5.57	5.55	5.54	5.53	5.53	5.83
1923	5.72	5.73	5.80	5.93	5.87	5.89	5.82	5.77	5.74	5.73	5.73	5.73	5.78
1924	5.82	5.77	5.76	5.74	5.67	5.68	5.68	5.68	5.68	5.68	5.68	5.68	5.71
1925	5.44	5.43	5.38	5.32	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.31
1926	5.20	5.15	5.17	5.15	5.08	5.09	5.08	5.08	5.08	5.08	5.08	5.08	5.11
1927	5.02	5.05	5.05	5.08	5.09	5.09	5.08	5.08	5.08	5.08	5.08	5.08	5.07
1928	4.72	4.77	4.75	4.75	4.89	4.95	5.02	5.08	5.08	5.08	5.08	5.08	4.94
1929	4.96	5.00	5.07	5.08	5.06	5.15	5.18	5.18	5.18	5.18	5.18	5.18	5.12
1930	5.17	5.20	5.10	5.08	5.04	5.03	5.04	5.04	5.04	5.04	5.04	5.04	5.06
1931	5.09	5.08	4.98	4.97	4.97	4.96	4.98	4.98	4.98	4.98	4.98	4.98	4.99
1932	5.20	5.26	5.10	5.06	4.96	4.96	4.98	4.98	4.98	4.98	4.98	4.98	5.03
1933	5.56	5.58	5.43	5.41	5.37	5.34	5.34	5.34	5.34	5.34	5.34	5.34	5.40
1934	5.26	5.28	5.29	5.29	5.29	5.29	5.29	5.29	5.29	5.29	5.29	5.29	5.28
1935	4.97	4.96	4.95	4.89	4.89	4.89	4.89	4.89	4.89	4.89	4.89	4.89	4.90
1936	4.02	3.98	3.98	3.97	3.95	3.95	3.94	3.94	3.94	3.94	3.94	3.94	3.96
1937	3.68	3.76	3.90	3.98	3.99	3.99	3.97	3.97	3.97	3.97	3.97	3.97	3.91
1938	4.01	4.07	4.05	4.11	3.98	3.90	3.79	3.79	3.79	3.79	3.79	3.79	3.91
1939	3.57	3.52	3.48	3.51	3.45	3.42	3.38	3.38	3.38	3.38	3.38	3.38	3.43

SECURITIES NO. 5
PART 2
EXHIBIT NO. 3619
FILED SEPTEMBER
PUBLIC UTILITIES

BASED ON BONDS OF 120 DOMESTIC CORPORATIONS--ACCORDING TO GROUPS

UNIT: PERCENT PER ANNUM

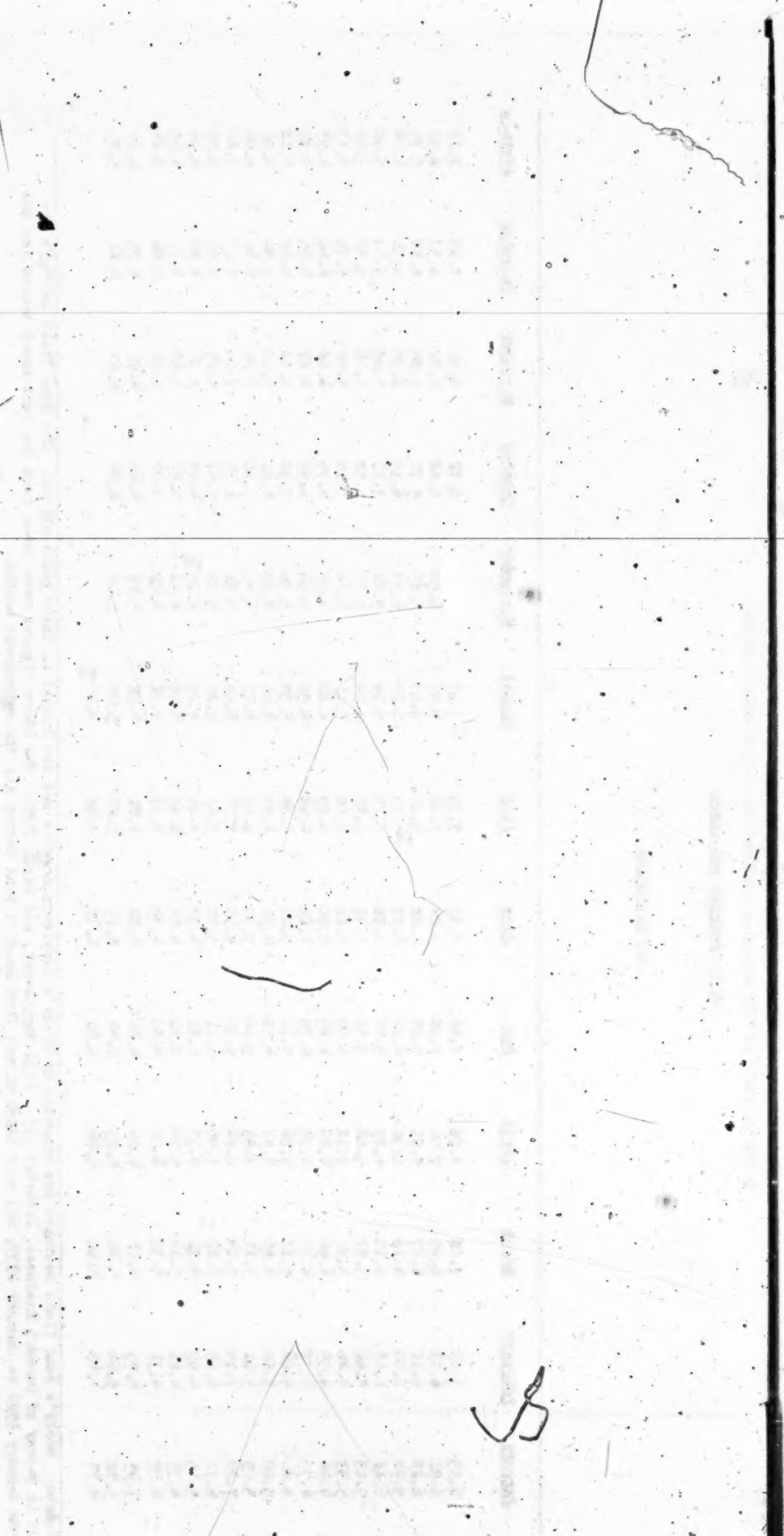
NO RAILROADS

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	6.93	7.09	7.08	7.26	7.46	7.40	7.39	7.23	6.91	6.72	6.85	7.15	7.12
1921	6.91	6.97	6.99	7.06	7.08	7.02	7.10	6.97	6.90	6.88	6.52	6.37	6.91
1922	6.28	6.11	6.07	5.91	5.85	5.88	5.77	5.68	5.65	5.72	5.89	5.88	5.89
1923	5.94	6.00	6.16	6.30	6.26	6.27	6.33	6.28	6.33	6.39	6.36	6.31	6.26
1924	6.18	6.17	6.14	6.09	6.02	5.88	5.73	5.78	5.81	5.78	5.65	5.63	5.90
1925	5.63	5.56	5.57	5.60	5.48	5.41	5.48	5.54	5.50	5.52	5.46	5.42	5.51
1926	5.33	5.26	5.18	5.18	5.09	5.06	5.08	5.11	5.10	5.10	5.02	5.00	5.13
1927	4.96	4.95	4.90	4.86	4.85	4.90	4.89	4.80	4.78	4.75	4.68	4.66	4.83
1928	4.70	4.73	4.72	4.74	4.78	4.91	4.94	4.98	4.96	4.93	4.87	4.95	4.85
1929	5.00	5.06	5.17	5.16	5.12	5.26	5.28	5.38	5.36	5.30	5.11	4.99	5.18
1930	5.00	5.02	4.89	4.92	4.98	4.91	4.89	4.86	4.80	4.91	5.10	5.14	4.96
1931	5.09	5.11	5.17	5.45	5.60	5.70	5.68	6.01	6.43	7.20	7.28	6.46	6.09
1932	7.20	7.10	7.06	8.24	9.30	9.14	8.70	6.96	6.58	6.75	7.00	7.27	7.61
1933	6.71	6.65	6.67	7.00	6.11	5.68	5.31	5.28	5.54	5.67	6.25	5.95	5.96
1934	5.45	4.99	4.91	4.78	4.81	4.78	4.80	5.03	5.15	4.99	4.98	4.86	4.96
1935	4.75	4.81	5.14	5.14	5.12	4.99	4.97	4.95	4.91	4.97	4.90	4.73	4.93
1936	4.50	4.31	4.32	4.38	4.40	4.35	4.31	4.22	4.09	4.02	4.00	3.96	4.21
1937	3.95	4.03	4.15	4.26	4.22	4.22	4.21	4.28	4.43	4.66	4.91	4.79	4.34
1938	5.02	5.06	5.04	5.75	5.44	5.75	5.85	5.09	5.16	4.94	4.83	4.82	5.21
1939	4.70	4.63	4.46	4.66	4.60	4.47	4.42	4.41					

Source of data: Moody's Bond Yield Averages are computed by Moody's Investors Service and are issued in their publications. The Bond Yield Averages are reproduced in Survey of Current Business, November 1937, 1938 Supplement, and March 1939. The above figures were taken from the last named source for the period from January 1920 to January 1939; and were taken direct from Moody's Bond Survey for the subsequent months.

3621

EXHIBIT NO. 5
PAGE 3
MOODY'S BOND YIELD AVERAGES
RAILROADS



2649 **Industrials**

Aaa

Liggett & Myers 5s, 1951
Socony-Vacuum 3s, 1964
Standard Oil N. J. 3s, 1961
Texas Corp. 3s, 1959

Aa

Lorillard Co. 5s, 1951
Shell Union Oil 2½s, 1954
Swift & Co. 3¼s, 1950

A

Bethlehem Steel 3¾s, 1966
Crane Co. 3½s, 1951
Fairbanks Morse 4s, 1956
Inland Steel 3¾s, 1961
Koppers Co. 4s, 1951
National Steel 3s, 1965
Tide Water Assoc. Oil 3½s, 1952
Youngstown Sheet and Tube 4s, 1961

Baa

Anaconda Copper 4½s, 1950
Armour Co. of Del. 4s, 1955
Crown Cork & Seal 4s, 1950
Goodrich (B. F.) 4½s, 1956
Jones & Laughlin 4½s, 1961
McCroy Stores 5s, 1951
Republic Steel 4½s, 1961
Revere Copper & Brass 4¼s, 1956
Wheeling Steel 4½s, 1966
Wilson Steel 4s, 1955

Note—Because of the limited number of suitable issues, the Industrial Aaa group now temporarily consist of four issues, the Industrial Aa group of three issues, and the Industrial A group of eight issues.

Source—The Commercial and Financial Chronicle, August 19, 1939.

2650 **Public Utilities**

Aaa

Brooklyn Edison 3½s, 1966
Cincinnati Gas & Elec. 3½s, 1966

Cons. Gas E. L. & P., Balto. 3s, 1969
Duquesne Light 3½s, 1965
Illinois Bell Tel. 3½s, 1970
New York Edison 3½s, 1965
Pacific Tel. & Tel. "B" 3½s, 1966
Philadelphia Electric 3½s, 1967
Southwestern Bell 3s, 1968
West Penn Power 3½s, 1966

Aa

American Tel. & Tel. 3¼s, 1961
Atlantic City Elec. 3¼s, 1964
Commonwealth Edison N. Y. 3½s, 1968
Consolidated Edison N. Y. 3½s, 1956
Detroit Edison 3½s, 1966.
Louisville Gas & Elec. 3½s, 1966
Ohio Power 3¼s, 1968
Pacific Gas & Elec. 3¾s, 1961
Southern Calif. Edison ref. 3¾s, 1960
Virginia El. & Pr. 3½s, 1968

A

Central Illinois Pub. Serv. 3¾s, 1968
Central Maine Power 3½s, 1966
Gulf States Utilities 3½s, 1969
Indianapolis P. & L. 3¾s, 1968
Lake Superior Dist. Pr. 3½s, 1966
Montana Power 3¾s, 1966
Ohio Edison 3¾s, 1972
Pennsylvania Pr. & Lt. 3½s, 1969
Sioux City Gas & Elec. 4s, 1966
Wisconsin Pub. Serv. 4s, 1961

Baa

Arkansas Pr. & Lt. 5s, 1956
Carolina Pr. & Lt. 5s, 1956
Illinois Pr. & Lt. 5s, 1956
Iowa-Nebraska Lt. & Pr. 5s, 1957
Minnesota Pr. & Lt. 4½s, 1978
New Orleans Pub. Serv. 5s, 1955
Northern Indiana Pub. Serv. 4½s, 1970
Penn. Central Lt. & Pr. 4½s, 1977
Peoples Gas Light & Coke 4s, 1981
Wisconsin Pr. & Lt. 4s, 1966

2651 **Railroads**

Aaa

Chesapeake & Ohio 4½s, 1992
Cincinnati Union Term. 3⅜s, 1969
Hocking Valley 4½s, 1999
Norfolk & Western 4s, 1996
Union Pacific 4s, 2008

Aa

Atch. Topeka & S. Fe gen. 4s, 1995
Chesapeake & Ohio "D" 3½s, 1996
Chicago Lake Shore & East. 4½s, 1969
Chicago Union Station 3¾s, 1963
Duluth Missabe & I. R. 3½s, 1962
Monongahela Ry. 4s, 1960
Ore-Wash. R. R. & Nav. 4s, 1961
Pennsylvania 4½s, 1960
Union Pacific 3½s, 1971
Virginian Ry. 3¾s, 1966

A

Atch. Topeka & S. Fe. R. M. div. 4s, 1965
Chicago & Western Indiana 4s, 1952
Great Northern 4½s, 1961
Lexington & Eastern 5s, 1965
N. Y. Connecting RR 4½s, 1953
Northern Central Ry. 4½s, 1974
Pennsylvania 4½s, 1984
Piedmont & Northern 3¾s, 1966
Pgh. Cin. Chic. & St. L. 5s, 1975
Texas & Pacific 1st 5s, 2000

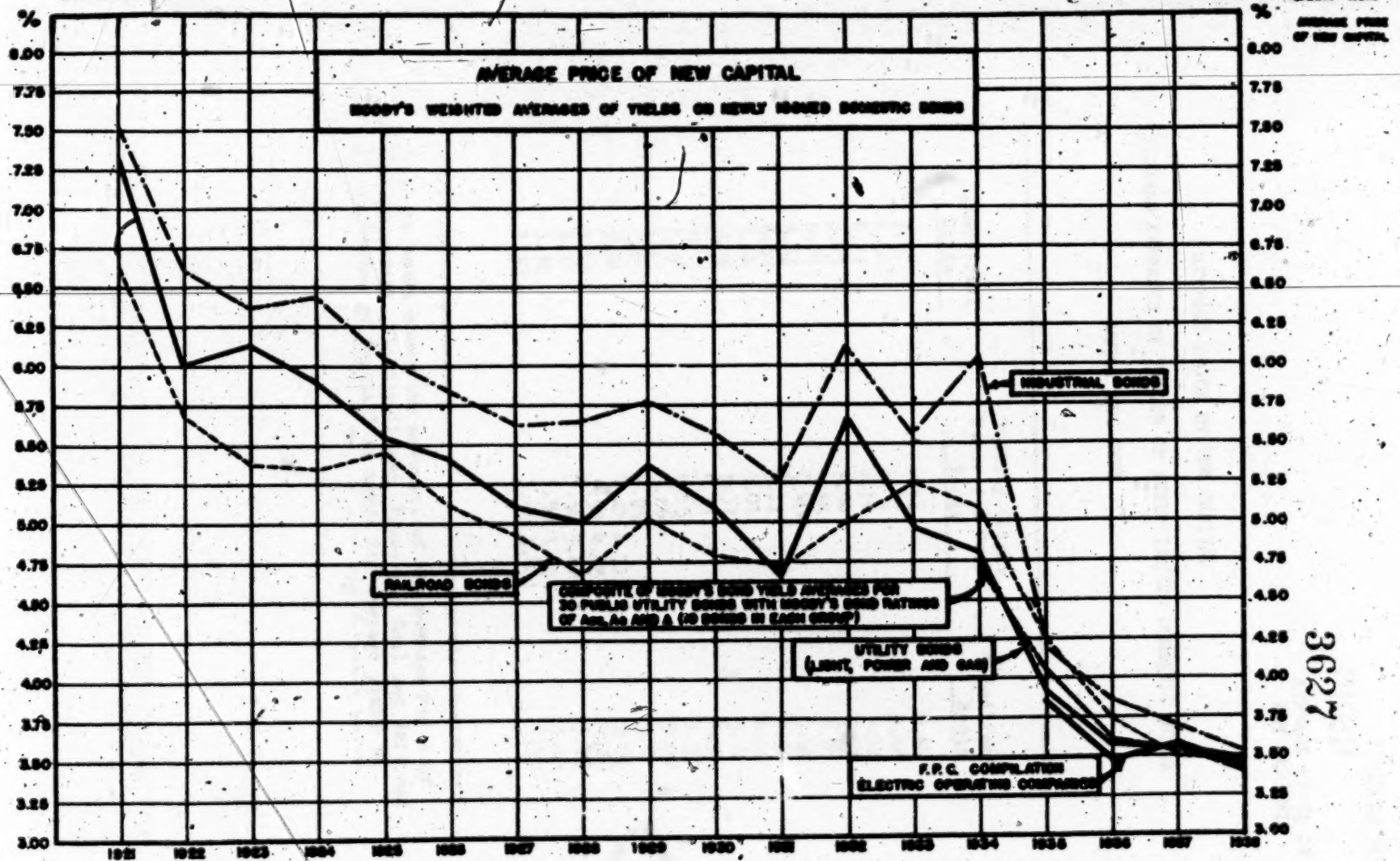
Baa

Atlantic Coast Line 4s, 1952
Chicago Burl. & Quincy 4½s, 1977
Great Northern 4½s, 1976
Louisiana & Nashville 3⅜s, 2003
Louisville & Nashville 3¾s, 2003
Northern Pacific 4s, 1997
Pennsylvania 4½s, 1970
Reading "A" 4½s, 1997
Texas & Pacific 5s, 1980
Western Maryland 4s, 1952

Note—Because of the limited number of suitable issues, the Railroad Aaa group now temporarily consists of five issues.

CHART NO. 6

AVERAGE PRICE OF NEW CAPITAL



3627

9.

AVERAGE PRICE OF NEW CAPITAL

MOODY'S WEIGHTED AVERAGES OF YIELDS ON NEWLY ISSUED DOMESTIC BONDS

UNIT: PER CENT

Year	Industrial Bonds	Utility (Light, Power and Gas) Bonds	Railroad Bonds
1921	7.57	7.34	6.64
1922	6.62	6.02	5.68
1923	6.37	6.14	5.38
1924	6.43	5.90	5.34
1925	6.05	5.55	5.45
1926	5.83	5.40	5.12
1927	5.62	5.11	4.94
1928	5.64	5.01	4.68
1929	5.76	5.37	5.02
1930	5.57	5.11	4.79
1931	5.26	4.65	4.73
1932	6.12	5.66	5.00
1933	5.56	4.95	5.24
1934	6.04	4.81 4.71)	5.09
1935	4.19	3.92 4.05)	4.25
1936	3.87	3.56 3.62) *	3.76
1937	3.70	3.56 3.55)	3.49
1938	3.52	3.49 3.40)	3.47

Note: The above table shows the movement of the Average Price of Capital for Industrial, Utility (Light, Power and Gas) and Railroad Bonds. By the "Price of Capital" is meant the average yield to maturity on newly issued bonds. The figures are weighted by the amounts of all new issues floated in any year.

Source of above: Moody's Industrials, 1939, pages a35 and a36; and Moody's Public Utilities, 1939, pages a7 and a8.

* Represents composite of Moody's bond yield averages for 30 public utility bonds of three rating groups, Aaa, Aa and A, each group consisting of 10 bonds (see Schedule No. 4), as follows:

Year	Aaa	Aa	A	Average
1934	3.92	4.66	5.55	4.71
1935	3.52	4.02	4.61	4.05
1936	3.21	3.57	4.08	3.62
1937	3.21	3.45	3.98	3.55
1938	3.03	3.28	3.90	3.40

2654

YIELD TO PURCHASERS - ELECTRIC UTILITY BONDS SOLD IN 1935, 1936, 1937, AND 1938

SUMMARY, ACCORDING TO YEARS

1935

Rating	Number of Issues	Total Principal Amount	Average Yield %
Aaa	12	$ 264,531,000	3.45
Aa	21	505,232,900	3.78
A	10	165,563,500	4.26
Baa	4	11,500,000	5.26
Ba	1	7,500,000	6.00
No Rating Assigned	6	67,130,000	3.63
Total	54	$ 1,021,457,400	3.81

1936

Rating	Number of Issues	Total Principal Amount	Average Yield %
Aaa	11	$ 273,178,500	3.16
Aa	22	514,946,500	3.39
A	20	281,309,400	3.73
Baa	5	59,250,000	4.03
Ba	3	4,792,800	4.76
B	1	2,300,000	4.50
No Rating Assigned	15	157,666,200	3.56
Total	77	$ 1,293,643,400	3.58

1937

Rating	Number of Issues	Total Principal Amount	Average Yield %
Aaa	4	$ 147,000,000	3.37
Aa	10	252,029,000	3.52
A	7	121,264,000	3.72
Baa	6	13,831,000	4.64
No Rating Assigned	15	35,078,000	3.78
Total	42	$ 569,202,000	3.63

1938

Rating	Number of Issues	Total Principal Amount	Average Yield %
Aaa	3	$ 27,000,000	3.00
Aa	17	303,073,000	3.31
A	13	273,000,740	3.76
Baa	3	16,800,000	4.26
No Rating Assigned	11	94,834,000	3.16
Total	47	$ 914,707,740	3.57

Total - 1935, 1936, 1937, and 1938	227	$ 3,799,512,840	3.58

Note: The above Summary of Average Yield was prepared from all known bond issues of Electric Operating Utilities, sold in 1935, 1936, 1937, and 1938.

3631

SCHEDULE NO. 1
PAGE 1
YIELD TO PURCHASERS ACCORDING TO YEARS

2655

YIELD TO PURCHASERS - ELECTRIC UTILITY BONDS SOLD IN 1935, 1936, 1937, AND 1938

SUMMARY, ACCORDING TO RATINGS

Aaa Rating

Year	Number of Issues	Total Principal Amount	Average Yield %
1935	12	$ 264,531,000	3.48
1936	11	273,178,500	3.18
1937	4	147,000,000	3.37
1938	3	27,000,000	3.00
Total	30	$ 711,709,500	3.32

A Rating

Year	Number of Issues	Total Principal Amount	Average Yield %
1935	10	$ 165,563,500	4.28
1936	20	281,509,400	3.73
1937	7	121,264,000	3.72
1938	13	273,000,740	3.74
Total	50	$ 841,337,640	3.84

Aa Rating

Year	Number of Issues	Total Principal Amount	Average Yield %
1935	21	$ 505,238,900	3.78
1936	22	514,948,500	3.39
1937	10	252,029,000	3.52
1938	17	503,075,000	3.31
Total	70	$ 1,775,291,400	3.50

Baa Rating

Year	Number of Issues	Total Principal Amount	Average Yield %
1935	4	$ 11,500,000	5.28
1936	5	59,250,000	4.03
1937	6	13,251,000	4.64
1938	3	16,800,000	4.24
Total	18	$ 100,801,000	4.29

3633

SCHEDULE 20.7
PAGE 2

BOND YIELDS-
ACCORDING TO
RATINGS

2856

YIELD TO PURCHASERS - ELECTRIC UTILITY BONDS SOLD IN 1935, 1936, 1937, AND 1938

SUMMARY, ACCORDING TO RATINGS

Aa Rating

Year	Number of Issues	Total Principal Amount	Average Yield %
1935	1	$ 7,500,000	6.00
1936	3	4,792,800	4.74
Total	4	$ 12,292,800	5.20

A Rating

Year	Number of Issues	Total Principal Amount	Average Yield %
1936	1	$ 2,100,000	4.90
Total	1	$ 2,100,000	4.90

No Rating Assigned

Year	Number of Issues	Total Principal Amount	Average Yield %
1935	6	$ 67,[illegible],000	3.63
1936	15	157,[illegible],900	3.96
1937	15	36,078,000	3.78
1938	18	[illegible],000	3.18
Total	54	$ [illegible]	3.[illegible]

Total - 1935, 1936, 1937, and 1938	267	$ 3,[illegible]	3.[illegible]

Note: The above Summary of Average Yield was prepared from all known issues of Electric Operating Utilities, sold in 1935, 1936, 1937, and 1938.

3635
FILED PURSUANT TO ORDER
SEC FILE
RELEASE

YIELD TO PURCHASERS - ELECTRIC UTILITY BONDS SOLD IN PERIOD FROM JANUARY 1, 1939 TO AUGUST 31, 1939

Company	Month of Offering	Issue	Principal Amount	Price to Public Amount	Price to Public Yield %
		Rating Aaa			
Consolidated Gas Electric Light and Power Company of Baltimore	June	First & Refunding 3s, Series P, 1969	$7,000,000	105.00	2.75
Total - Rating Aaa			$7,000,000		2.75
		Rating Aa			
Kansas Power & Light Co.	July	First Mtg. 3½s, 1969	$26,500,000	105½	3.06
Northern States Power Co. (Wisc.)	March	First Mtg. 3½s, 1964	17,500,000	106	3.15
Rochester Gas & Electric Corp.	June	General 3½s, Series J, 1969	4,323,000	105½	2.97
Total - Rating Aa			$48,323,000		3.08
		Rating A			
Central Maine Power Co.	February	First & General 3½s, Series J, 1968	$ 4,500,000	102	3.39
Commonwealth Edison Co.	April	Debentures, 3½s, 1958	25,283,300	100	3.50
Gulf States Utilities Co.	June	First & Refunding, Series D, 3½s, 1969	27,300,000	106 3/4	3.15
New York State Electric & Gas Corp.	June	First Mtg. 3 3/4s, 1964	13,000,000	102	3.63
Otter Tail Power Co.	March	First Mtg. 3½s, 1969	1,200,000	98	3.61
Pennsylvania Power & Light Co.	August	First Mtg. 3½s, 1969	95,000,000	105½	3.21
Washington Water Power Co.	June	First Mtg. 3½s, 1964	22,000,000	105	3.21
West Penn Utilities Co.	June	First Mtg. 3 3/4s, Series A, 1969	18,000,000	101 3/4	3.65
Total - Rating A			$206,283,300		3.31

3637

EXHIBIT NO. 1
FILED WITH SECURITIES AND EXCHANGE COMMISSION
AUGUST 31, 1939

SCHEDULE NO. 6
PAGE 2

BOND YIELDS-
JANUARY 20
AUGUST, 1939

3639

YIELD TO PURCHASERS - ELECTRIC UTILITY BONDS SOLD IN PERIOD FROM JANUARY 1, 1939 TO AUGUST 31, 1939

Company	Month of Offering	Issue	Principal Amount	Price to Public Amount	Price to Public Yield %
		Rating Baa			
Central Illinois Electric & Gas Co.	June	First Mtg. 3 3/4s, 1964	$14,750,000	100½	3.77
Central Ohio Light & Power Co.	August	First Mtg. Series C, 4s, 1964	4,100,000	103⅝	3.80
Central Power & Light Co.	August	First Mtg. Series A, 3 3/4s, 1969	25,000,000	101	3.70
Community Public Service Co.	March	First Mtg. 4s, 1964	6,600,000	100	4.00
Iowa Public Service Co.	August	First Mtg. 3 3/4s, 1969	14,250,000	101	3.70
Kansas Power Co.	July	First Mtg. Series A, 4s, 1964	5,000,000	101½	3.93
Montana-Dakota Utilities Co.	May	First Mtg. 4½s, 1959	9,000,000	101	4.34
Pennsylvania Power & Light Co.	August	Debentures 4½s, 1974	28,500,000	104	4.28
Total - Rating Baa			$107,200,000		3.96
		Rating Ba			
Arkansas-Missouri Power Corp.	May	First Mtg. 5s, 1957	$ 500,000	101	4.91
Southern Utah Power Co.	May	First Mtg. Series A, 5½s, 1960	99,000	97	5.75
Upper Michigan Power & Light Co.	August	First Mtg. & P. Series A, 4s, 1939	1,050,000	100½	3.96
Total - Rating Ba			$1,649,000		4.36

YIELD TO PURCHASERS - ELECTRIC UTILITY BONDS SOLD IN PERIOD FROM JANUARY 1, 1939 TO AUGUST 31, 1939

Company	Offering	Issue	Principal Amount	Price to Public Amount	Price to Public Yield %
No Rating Assigned					
Colorado Central Power Co.	May	First Mtg. Series A, 4½s, 1959	$ 725,000	102½	4.07*
Columbus & Southern Ohio Electric Co.	January	First & Collateral 3½s, 1968	1,900,000	100 (A)	3.85*
Commonwealth Edison Co.	May	First Mtg. Series J, 3½s, 1979	114,300,000	102	3.18*
Dakota Power Co.	July	First Mtg. 4½s, 1960	675,000	100 (A)	4.25*
Indiana & Michigan Electric Co.	July	First Mtg. 3½s, 1969	22,500,000	103	3.10*
Litchfield Electric Light & Power Co.	July	First Mtg. 4s, 1964	450,000	104	3.75*
Maine Consolidated Power Co.	June	First Mtg. Series A, 4s, 1964	300,000	102½	3.84
Rupert Electric Co.	May	First Mtg. 4½s, 1954	304,000	118	3.00
Northwestern Wisconsin Electric Co.	July	First Mtg. 5s, 1954	125,000	100	5.00*
Public Electric Light Co.	January	First Mtg. Series C, 4s, 1961	100,000	100 (A)	4.00
Southern California Edison Co., Ltd.	June	First & Refunding 3½s, 1964	30,000,000	104.37	3.07*
Total - No Rating Assigned			$171,579,000		3.14
GRAND TOTAL			$246,034,300		3.36

* Private sales

(A) Assumed price of par

SUPPLEMENT NO. 8
PART 3
BOND YIELDS
JANUARY TO
AUGUST, 1939

COST OF MONEY TO ISSUING COMPANIES AND YIELD TO PUBLIC OF ELECTRIC UTILITY PREFERRED STOCKS SOLD IN 1935, 1936, 1937 AND 1938

Company	Offering Date	Issue	Number of Shares	Net Price to Company: Per Share	Net Price to Company: Total	Net Price to Company: Cost	Price to Public: Per Share	Price to Public: Total	Price to Public: Yield
Cleveland Electric Illuminating Co., The	Oct. 1935	Cum. Pfd. $4.50, no par	254,995	100.00	$ 25,499,500	4.50%	102.75	$ 26,200,736	4.38%
Total 1935					$ 25,499,500	4.50%		$ 26,200,736	4.38%
Central Illinois Light Co.	Apr. 1936	Cum. Pfd. $4.50, $100 par	117,037	98.73	$ 11,555,063	4.56%	102.00	$ 11,937,774	4.41%
Dayton Power & Light Co.	June 1936	" " $4.80, $100 par	100,000	99.41	9,941,000	4.83%	102.50	10,250,000	4.39%
Public Service Company of New Hampshire	Aug. 1936	" " $5.00, no par	4,860	94.19	457,763	5.31%	97.25	472,635	5.14%
Rochester Gas & Electric Corp.	Sept.1936	" " $4.50, $100 par	40,000	98.30	3,932,000	5.09%	102.00	4,080,000	4.90%
Cumberland County Power & Light Co.	Oct. 1936	" " $4.50, $100 par	10,000	99.38	993,800	5.53%	103.00	1,030,000	5.34%
Southern Indiana Gas & Electric Co.	Oct. 1936	" " $4.80, $100 par	85,895	99.38	8,536,845	4.83%	102.75	8,825,711	4.67%
Central Hudson Gas & Electric Corp.	Nov. 1936	" " $4.75, $100 par	3,404	103.53	352,416	4.59%	105.00	357,420	4.29%
Missouri Power & Light Co.	Dec. 1936	" " $6.00, no par	15,000	98.39	1,475,850	6.10%	101.50	1,522,500	5.91%
Public Service Company of New Hampshire	Dec. 1936	" " $5.00, no par	11,200	96.75	1,112,625	5.17%	100.00	1,120,000	5.00%
Total 1936					$ 38,206,762	4.71%		$ 39,686,040	4.64%
Consumers Power Co.	Jan. 1937	Cum. Pfd. $4.50, no par	547,788	97.23	$ 53,261,427	4.63%	100.50	$ 55,052,694	4.48%
Northern States Power Co.	Feb. 1937	" " $5.00, no par	275,000	99.54	27,483,500	5.00%	103.00	28,325,000	4.85%
Ohio Public Service Co.	Aug. 1937	1st " 5%, $100 par	16,000	87.88	1,406,240	6.86%	92.50	1,480,000	5.97%
Total 1937					$ 82,151,167	4.78%		$ 84,857,694	4.63%

COST OF MONEY TO ISSUING COMPANIES AND YIELD TO PUBLIC

OF ELECTRIC UTILITY PREFERRED STOCKS SOLD IN 1935, 1936, 1937 AND 1938

Company	Offering Date	Issue	Number of Shares	Net Price to Company: Per Share	Net Price to Company: Total	Net Price to Company: Cost	Price to Public: Per Share	Price to Public: Total	Price to Public: Yield
Cumberland County Power & Light Co.	Feb. 1938	Cum. Pfd. 5%, $100. par	10,000	92.39	$ 923,900	5.99%	97.00	$ 970,000	5.67%
New York & Queens Elec. Lt. & Pr. Co.	Aug. 1938	Non-Cum. Pfd. 5%, $100 par	8,772	97.49	855,182	5.13%	100.00	877,200	5.00%
Union Electric Company of Missouri	Nov. 1938	Cum. Pfd. $5.00, no par	130,000	102.03	13,263,900	4.90%	106.00	13,780,000	4.92%
Public Service Company of New Hampshire	Dec. 1938	" " $5.00, no par	8,737	85.84	749,984	5.82%	91.00	795,067	5.49%
Pennsylvania Power Co.	Dec. 1938	" " $5.00, no par	42,000	97.31	4,087,080	5.14%	101.00	4,242,000	4.95%
Total 1938					$ 19,879,986	5.04%		$ 20,664,267	4.85%
Total 1935, 1936, 1937 and 1938					$65,637,315	4.77%		$71,745,737	4.62%

Note: The above covers all known Preferred Stock Issues of Electric Operating Utilities sold in 1935, 1936, 1937 and 1938. The cost of money is the cost, after deduction of all expenses in connection with the sale of stock, and this cost was obtained from "Security Issues of Electric and Gas Utilities, 1935, 1936, 1937 and 1938", issued by the Securities and Exchange Commission. The yield to purchasers is the yield based on the offering price of stocks.

3645

SCHEDULE NO. 9
PAGE 2

COST OF MONEY AND YIELD, PREFERRED STOCKS

YIELD TO PURCHASERS - ELECTRIC UTILITY PREFERRED STOCKS SOLD IN PERIOD FROM JANUARY 1, 1939 TO AUGUST 31, 1939

Company	Month of Offering	Issue	Price to Public Amount	Price to Public Yield %
Arkansas-Missouri Power Corp.	May	3,604 shs. 6% Cumulative Preferred ($50 par)	$ 43.50	6.90
Central Ohio Light & Power Co.	August	2,200 shs. $6 Preferred	90.00	6.67
Consolidated Gas Electric Light and Power Company of Baltimore	April	1,705 shs. 4½% Series B Preferred ($100 par)	112.50	4.00 (A)
New York State Electric & Gas Corp.	June	60,000 shs. 5½% Preferred	100.00	5.50
San Antonio Public Service Co.	July	45,000 shs. 6% Cumulative Preferred	104.00	5.77
West Penn Power Co.	July	297,077 shs. 4½% Preferred	110.00	4.09
Wisconsin Gas & Electric Co.	July	20,282 shs. 4½% Series	100.00	4.50 (B)
TOTAL				4.67*

(A) Total issue was 223,063 shares 4½% Series B Preferred Stock. Of the total number of shares, 221,358 shares were exchanged for 5% Series A Preferred Stock, and the remaining 1,705 shares were offered at $112.50 per share.

(B) Total issue was 56,480 shares 4½% Series Preferred Stock. Of the total number of shares, 36,238 shares were exchanged for 6% Series Preferred Stock, and the remaining 20,242 were offered at par.

* Weighted average.

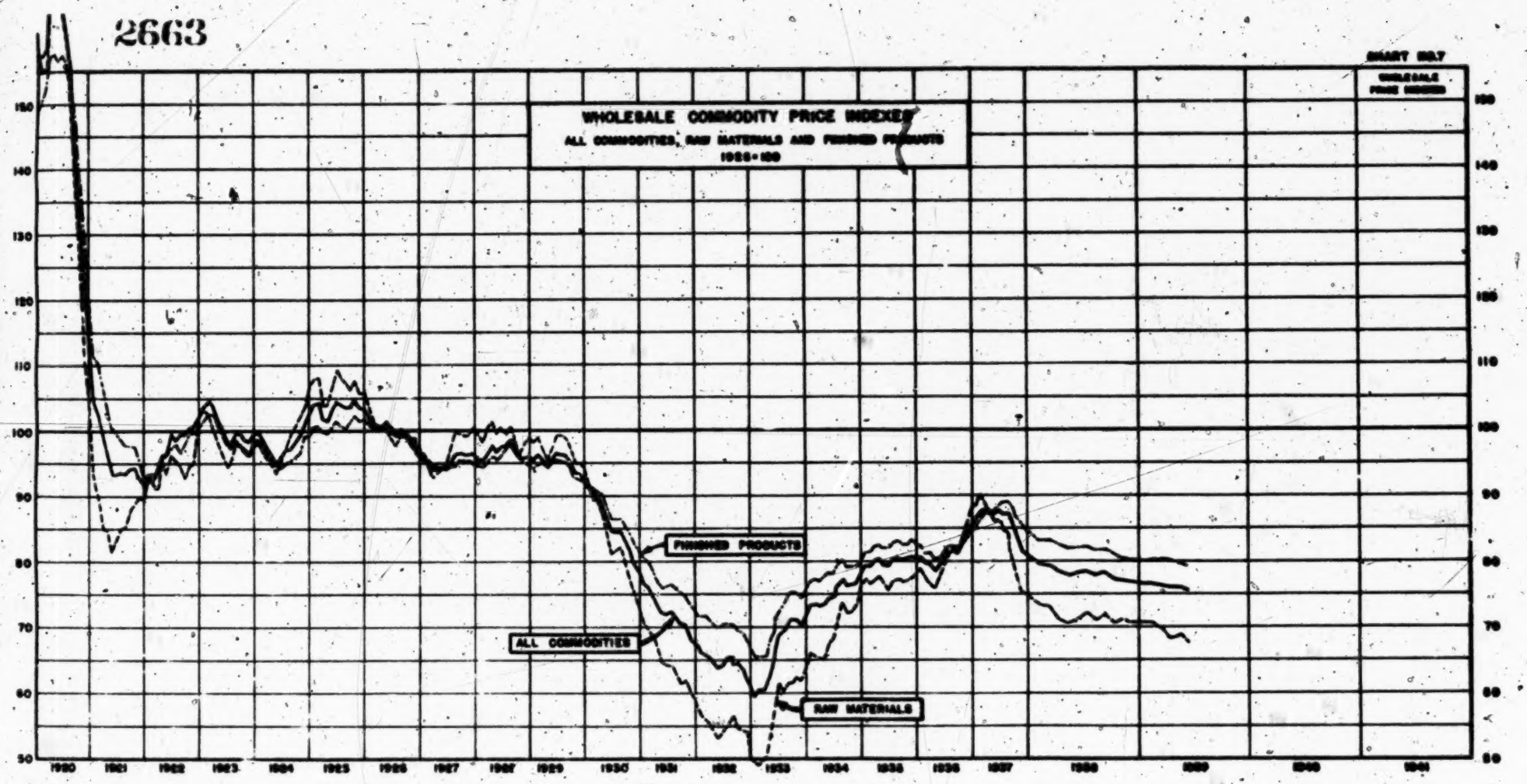


CHART 89.7
WHOLESALE PRICE INDEXES
WHOLESALE COMMODITY PRICE INDEXES
ALL COMMODITIES, RAW MATERIALS AND FINISHED PRODUCTS
1926=100
FINISHED PRODUCTS
ALL COMMODITIES
RAW MATERIALS
150
140
130
120
110
100
90
80
70
60
50
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941

WHOLESALE COMMODITY PRICE INDEXES

ALL COMMODITIES, RAW MATERIALS AND FINISHED PRODUCTS

1926 = 100

ALL COMMODITIES

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	157.7	157.1	156.6	165.5	167.2	166.5	165.8	161.4	155.2	144.2	133.4	130.7	154.4
1921	114.0	104.9	102.4	98.9	96.2	93.4	93.4	93.5	95.1	96.1	96.2	96.9	97.6
1922	91.4	92.9	92.8	95.2	96.1	96.3	99.4	98.6	99.3	99.6	100.2	100.7	96.6
1923	102.0	103.3	104.5	103.9	101.9	100.3	98.4	97.8	98.7	98.4	98.1	98.1	100.1
1924	99.6	99.7	98.5	97.3	95.9	94.9	95.6	97.0	97.1	98.2	98.5	101.5	98.1
1925	102.9	104.0	104.2	101.9	101.6	103.0	104.3	105.9	105.4	105.6	105.5	103.4	103.5
1926	103.2	102.0	100.6	100.3	100.5	100.4	99.5	99.1	98.7	98.4	98.5	97.9	100.0
1927	96.5	95.8	96.7	96.1	96.2	96.1	96.3	96.2	96.2	96.6	96.3	96.5	96.4
1928	96.4	95.8	95.5	96.6	97.5	96.7	97.4	97.6	96.8	96.7	96.8	96.7	96.7
1929	95.9	95.4	96.1	95.5	96.7	97.2	96.5	96.3	96.4	96.1	96.0	95.8	96.2
1930	92.5	91.4	90.2	90.0	88.8	88.5	88.4	88.3	88.4	87.8	87.5	87.6	89.1
1931	78.2	76.8	76.0	74.8	73.2	72.1	72.0	72.1	71.2	70.3	70.1	69.6	73.0
1932	67.3	66.3	66.0	65.5	65.4	65.3	66.5	67.2	67.3	68.2	68.1	68.1	66.9
1933	61.0	59.8	60.2	60.4	62.7	63.0	63.9	64.2	64.6	64.5	64.1	64.4	62.9
1934	72.2	73.6	73.7	73.3	73.7	74.6	74.8	74.8	74.6	74.5	74.5	74.9	74.0
1935	78.8	79.5	79.4	80.1	80.2	79.8	79.4	80.0	80.1	80.5	80.5	80.9	79.9
1936	80.6	80.6	79.6	79.7	78.6	79.2	80.5	80.6	80.6	80.5	80.5	80.7	80.1
1937	85.9	86.3	87.8	88.0	87.4	87.2	87.9	87.5	87.4	87.6	87.5	87.0	87.3
1938	80.9	79.8	79.7	78.7	78.1	78.3	78.8	78.1	78.3	77.6	77.5	77.0	78.6
1939	76.9	76.9	76.7	76.2	76.2	75.6							

SOURCE BOOK
TABLE 1
PRICE INDEXES
ALL COMMODITIES

ALL COMMODITIES, RAW MATERIALS AND FINISHED PRODUCTS

1926 = 100

RAW MATERIALS

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	139.8	138.1	135.7	131.8	143.4	146.0	146.1	140.6	134.4	140.6	127.4	111.4	131.8
1921	105.4	93.5	91.7	89.0	86.6	91.2	83.6	87.9	85.8	87.9	88.9	89.3	88.3
1922	89.3	93.3	91.7	91.6	93.9	93.5	101.2	97.8	99.8	97.7	99.2	98.2	96.0
1923	102.3	103.2	102.8	100.7	98.1	98.5	98.5	98.2	98.0	98.3	97.0	98.6	97.6
1924	97.9	98.2	96.5	96.3	98.4	98.5	98.9	97.9	97.1	98.5	100.1	103.2	106.7
1925	104.9	107.8	108.0	105.9	101.1	103.3	103.0	108.0	107.3	105.3	107.4	105.7	100.5
1926	105.9	105.7	100.9	108.6	100.6	100.0	98.5	97.6	99.3	99.5	98.2	99.2	96.5
1927	97.3	94.0	94.0	98.7	97.9	98.1	98.7	97.6	98.9	98.5	98.0	97.4	97.5
1928	100.3	98.1	98.1	100.2	101.8	98.4	100.4	98.2	100.5	97.3	98.2	98.0	98.1
1929	98.8	98.1	98.0	97.0	95.3	98.6	99.1	98.2	98.9	97.1	98.5	98.2	98.2
1930	94.0	94.0	93.3	93.8	87.8	94.9	94.1	93.9	94.1	95.5	96.0	95.2	95.2
1931	82.7	84.5	84.1	85.3	84.5	86.7	84.3	84.1	84.7	85.2	84.2	84.2	84.2
1932	78.3	78.4	78.1	78.5	77.7	78.2	78.7	78.6	78.7	78.5	78.2	78.2	78.2
1933	78.2	78.4	78.2	78.0	77.1	77.2	77.5	77.6	77.3	78.1	77.2	77.2	77.2
1934	78.1	78.4	77.4	77.5	77.6	77.3	77.8	77.5	77.8	78.1	77.1	77.6	77.5
1935	78.1	78.1	78.1	77.0	75.8	77.6	77.6	77.5	77.4	78.1	77.2	77.4	77.2
1936	78.1	78.1	78.1	77.7	77.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1
1937	78.1	78.1	78.1	78.1	77.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1	78.1
1938	78.9	78.9	78.2	78.3	77.0	77.4	77.3	77.4	77.4	78.1	78.1	78.1	78.0
1939	78.9	78.9	78.1	78.5	77.9	77.7	77.3	77.4	77.4	78.1	78.1	78.1	78.0

ALL COMMODITIES, RAW MATERIALS AND FINISHED PRODUCTS

1926 = 100

FINISHED PRODUCTS

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	148.5	150.5	152.3	157.2	157.6	156.7	157.7	156.5	152.1	144.3	136.2	126.5	149.6
1921	119.2	111.7	110.1	107.4	103.1	100.7	99.4	98.7	97.9	97.8	97.5	97.2	103.3
1922	92.4	92.6	93.6	96.3	96.2	97.9	97.9	96.7	96.0	95.4	95.7	95.6	96.1
1923	100.1	101.1	102.4	102.4	101.0	99.7	98.2	97.2	96.3	97.8	96.5	96.2	98.9
1924	96.2	96.3	97.3	95.9	95.2	94.5	94.1	95.0	95.5	95.9	96.8	99.0	96.0
1925	99.1	100.4	100.9	99.8	99.6	100.5	101.1	100.8	100.3	101.3	102.1	101.5	100.6
1926	101.8	101.1	100.4	100.2	100.7	100.9	98.9	98.6	98.8	99.3	98.5	98.3	100.0
1927	96.2	95.9	95.1	96.7	96.4	96.2	96.3	96.2	96.7	97.6	97.3	97.3	96.6
1928	96.8	96.5	96.4	95.2	96.0	95.7	96.4	97.3	98.3	98.8	98.9	98.7	96.9
1929	96.7	96.3	96.8	95.0	96.6	95.0	95.6	95.2	95.0	94.2	94.1	93.7	95.0
1930	92.1	91.5	90.9	90.7	90.1	89.4	88.6	88.2	87.4	85.4	84.1	83.1	88.5
1931	81.5	80.3	79.6	78.3	76.9	76.0	76.1	76.4	75.9	75.1	74.8	73.3	77.0
1932	72.1	71.4	71.5	71.1	70.3	70.0	70.5	70.7	70.4	69.6	69.3	68.4	70.5
1933	66.7	65.7	65.7	65.7	67.2	69.0	72.2	73.4	74.8	75.4	75.2	74.8	70.5
1934	76.0	77.0	77.2	77.1	77.8	78.2	78.2	79.2	80.1	79.2	79.3	79.5	78.2
1935	80.8	81.5	81.7	82.3	82.4	82.2	82.0	83.0	83.1	82.7	82.7	83.1	82.2
1936	82.4	82.2	81.3	81.6	80.5	80.7	81.6	82.4	82.3	82.0	82.6	83.8	82.0
1937	86.9	85.4	86.4	87.4	87.5	87.7	88.8	89.0	89.1	88.1	86.7	85.3	87.2
1938	84.3	83.3	83.4	82.7	82.1	82.2	82.5	81.8	81.8	81.1	80.5	80.2	82.2
1939	80.0	80.2	80.2	80.1	79.9	79.6							

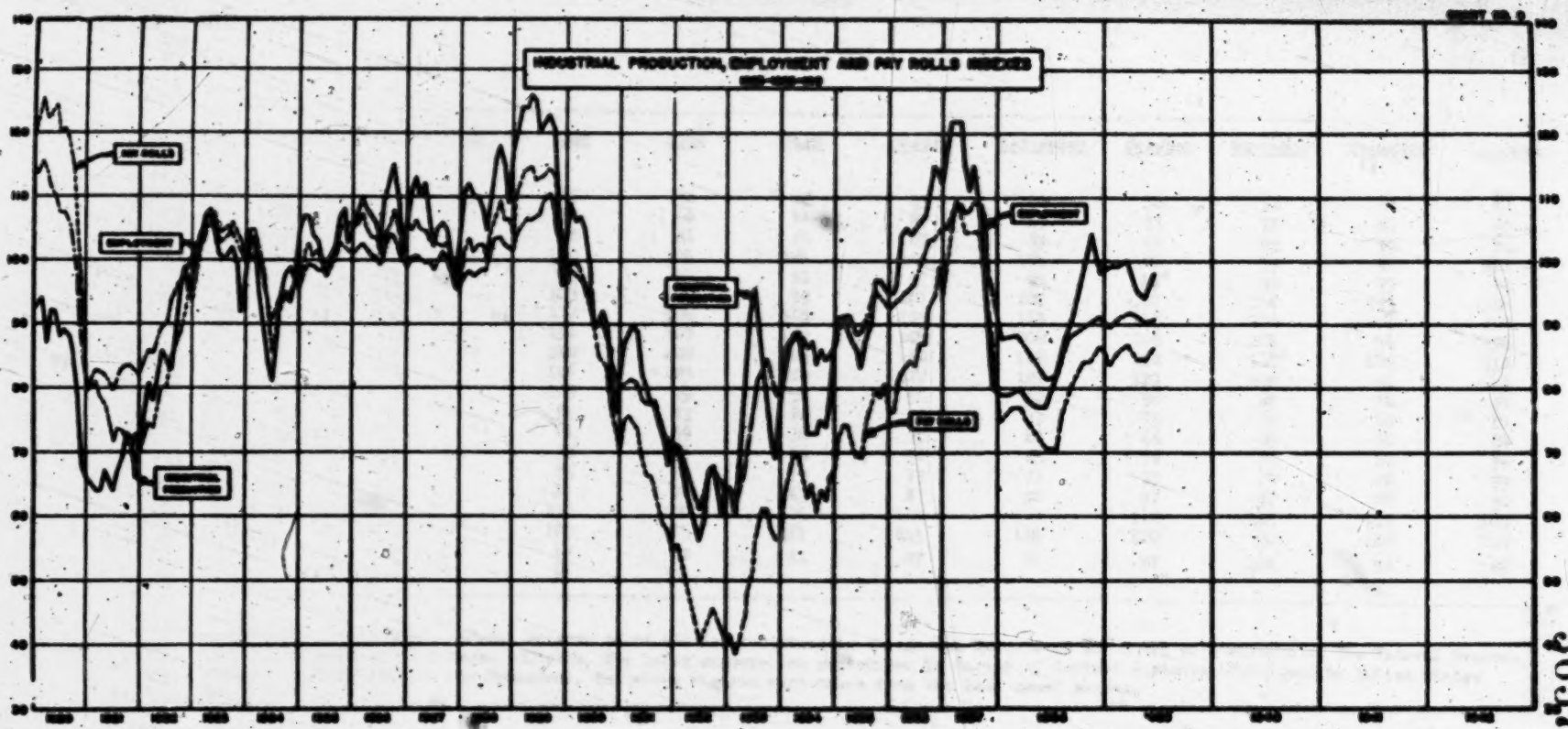
Source of data: The Commodity Price Indexes were computed by the United States Bureau of Labor Statistics and are contained in their publications. The Price Indexes are reproduced in Standard Trade and Securities (Published by Standard Statistics Company, Inc.) Volume 3, pages D-4 and D-5, dated June 5, 1936, and Current Statistics Section. The above figures were taken from Standard Trade and Securities.

3655

SCHEDULE E-11
PAGE 3

PRICE INDEXES
FINISHED
PRODUCTS

2667



3652

INDUSTRIAL PRODUCTION, EMPLOYMENT AND PAY ROLLS INDEXES

1923-1925 = 100

INDUSTRIAL PRODUCTION

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	92	93	94	87	87	85	88	87	88	86	78	76	87
1921	66	76	81	78	82	86	84	80	88	88	88	88	81
1922	72	101	103	107	108	103	101	100	101	102	102	97	101
1923	99	104	103	98	98	98	98	97	95	98	98	95	98
1924	99	107	107	106	105	100	102	101	102	107	108	103	103
1925	105	108	110	108	107	106	105	105	106	105	110	105	107
1926	106	111	113	110	112	107	102	110	113	108	101	102	108
1927	105	111	112	110	110	108	105	112	106	116	115	115	111
1928	117	121	124	124	126	125	120	110	123	121	108	118	119
1929	103	109	106	107	105	99	98	98	98	98	101	98	98
1930	82	87	89	90	89	93	96	93	87	88	85	85	89
1931	72	71	80	86	87	91	96	88	88	75	74	76	82
1932	64	64	67	67	79	84	85	78	78	78	77	78	75
1933	77	83	91	89	87	86	86	88	87	97	97	97	87
1934	88	91	96	104	105	104	105	106	107	110	115	114	104
1935	95	95	122	122	122	115	111	115	109	102	98	80	110
1936	112	117	80	78	77	77	81	87	91	97	104	98	86
1937	79	79	100	95	96	98	93	97	97	97	104	98	96
1938	100	99	100	95	96	98	93	97	97	97	104	98	96
1939	100	99	100	95	96	98	93	97	97	97	104	98	96

Source of data: The computations were made by the Federal Reserve Board, and are contained in the Annual Reports of the Board of Governors of the Federal Reserve System and in the monthly issues of the Federal Reserve Bulletin. The index numbers are reproduced in Survey of Current Business (Published by United States Department of Commerce, Bureau of Foreign and Domestic Commerce). The above figures were taken from the last named source.

3659

SCHEDULE NO. 12
PAGE 1

INDUSTRIAL PRODUCTION INDEX

[illegible] PRODUCTION, EMPLOYMENT AND PAY ROLLS COMBINED

1923-1925 = 100

[illegible]

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	114.3	113.3	115.6	114.0	111.1	110.1	107.5	107.4	106.1	102.1	95.6	88.0	107.1
1921	79.5	81.7	82.9	82.3	82.0	81.2	79.7	81.1	83.0	83.7	83.7	82.7	82.0
1922	82.4	84.5	85.8	85.7	87.9	89.6	90.2	93.1	95.1	96.6	96.0	99.1	90.7
1923	100.2	102.4	104.6	105.1	105.2	105.7	104.6	104.8	105.3	104.0	102.8	101.1	103.8
1924	100.1	101.7	101.9	100.1	96.8	93.8	90.6	92.0	94.2	95.0	94.5	96.1	96.4
1925	96.6	96.3	99.2	99.1	96.6	96.4	96.1	100.0	101.9	102.6	102.2	101.8	99.6
1926	101.0	102.0	102.5	101.8	100.8	100.8	99.6	101.8	103.0	103.6	101.6	100.3	101.7
1927	98.6	100.2	100.9	100.3	99.6	99.7	98.6	99.9	101.2	100.2	98.8	98.3	99.7
1928	95.3	97.2	98.2	97.8	97.8	98.5	98.4	101.1	103.3	103.5	102.6	102.1	99.7
1929	101.7	104.1	105.4	106.7	106.5	106.8	107.3	109.2	110.3	109.0	104.6	100.7	106.9
1930	96.2	96.3	97.5	97.3	95.6	93.6	90.4	89.7	90.7	88.7	83.4	82.9	92.4
1931	80.1	80.8	81.2	81.2	80.6	78.8	77.7	77.9	78.3	77.3	72.7	72.0	78.1
1932	70.0	71.2	70.1	67.8	65.2	63.2	61.0	62.7	64.1	65.2	64.3	65.1	65.9
1933	63.3	64.7	68.3	69.9	68.8	71.6	76.2	81.3	85.0	84.6	81.2	79.3	75.6
1934	78.8	83.7	87.2	88.8	89.0	87.8	86.3	87.4	87.5	85.9	84.3	83.6	85.7
1935	86.6	89.4	91.1	91.3	90.0	88.3	88.9	91.7	93.8	95.2	94.3	94.0	91.3
1936	92.1	92.2	93.4	94.7	95.4	95.9	97.1	99.9	101.9	103.2	103.3	104.4	97.8
1937	102.7	105.3	107.7	108.8	108.9	107.5	104.0	103.1	103.0	101.2	101.1	98.5	103.8
1938	87.8	88.2	87.7	85.7	83.4	81.6	82.9	85.7	88.8	89.5	90.5	91.2	86.8
1939	89.5	90.7	91.4	91.2	90.1	90.7							

Source of data: The computations were made by the United States Bureau of Labor Statistics, and are contained in their publications. The Employment Indexes are reproduced in Survey of Current Business (Published by United States Department of Commerce, Bureau of Foreign and Domestic Commerce). The above figures were taken from the last named source.

3661

[illegible]

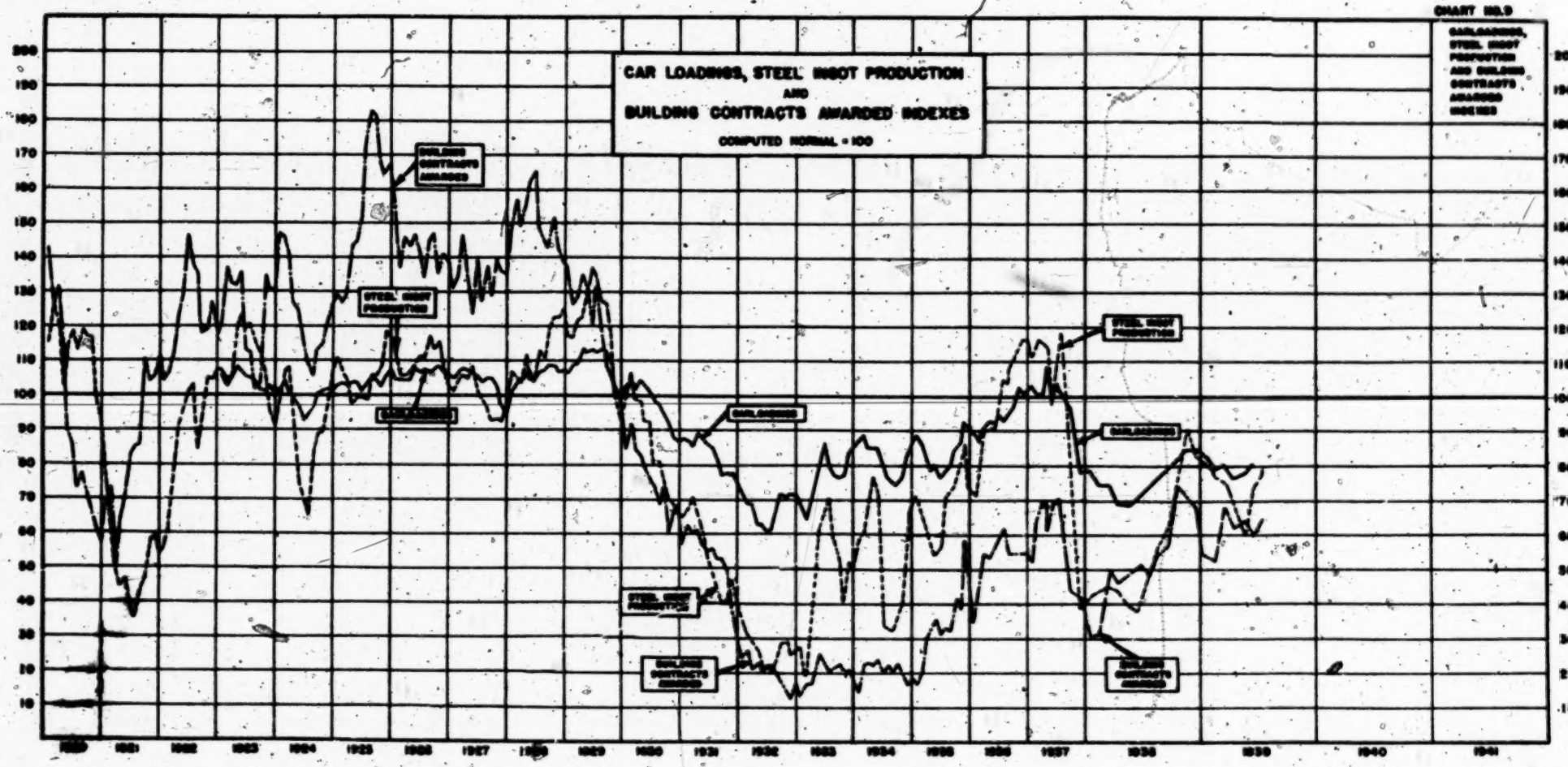
INDUSTRIAL PRODUCTION, EMPLOYMENT AND PAY ROLLS INDEXES

1923-1925 = 100

PAY ROLLS

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	119.1	117.4	125.4	122.3	123.0	124.4	120.0	120.6	116.9	114.4	105.0	95.5	117.2
1921	80.6	80.1	81.0	78.8	77.4	75.6	71.6	73.6	73.3	72.9	70.9	72.7	75.6
1922	69.6	72.5	76.4	73.6	77.0	80.0	80.2	86.1	87.0	88.7	92.2	94.5	81.2
1923	93.9	97.8	102.6	103.8	107.3	107.2	102.9	103.1	103.8	105.9	103.9	102.7	102.9
1924	98.9	104.5	104.5	102.0	97.6	91.6	85.3	89.1	92.4	94.6	93.1	97.6	96.0
1925	96.0	101.0	102.8	100.4	101.4	99.2	97.5	100.1	99.4	105.3	105.1	105.5	101.1
1926	101.6	105.7	107.2	104.9	103.5	103.7	99.4	103.8	105.1	108.0	104.3	103.6	104.2
1927	98.6	104.8	106.6	105.0	104.8	103.2	99.1	102.5	102.1	102.7	98.9	100.0	102.4
1928	96.6	102.0	103.5	101.3	102.3	102.7	100.2	104.6	106.2	109.5	106.2	106.9	103.5
1929	103.8	110.8	113.0	114.1	114.3	112.7	106.6	113.5	114.4	113.7	104.9	101.2	110.4
1930	96.5	99.6	99.7	98.5	96.1	92.9	89.0	91.8	88.6	82.9	77.3	75.4	89.4
1931	70.3	74.4	75.9	74.7	73.6	69.9	66.6	68.4	63.8	61.8	58.6	57.8	67.8
1932	54.0	55.4	55.6	53.6	52.8	49.7	48.4	51.4	49.0	45.8	43.6	42.4	49.7
1933	46.3	47.4	48.3	49.6	48.4	43.7	43.1	46.6	47.3	48.1	47.2	46.5	46.1
1934	56.1	62.9	67.2	69.6	69.7	67.4	62.8	65.1	60.8	61.0	57.3	56.2	62.5
1935	67.5	72.6	74.3	74.4	71.7	69.9	69.1	74.0	76.7	79.4	78.6	80.4	74.1
1936	76.7	78.6	80.3	82.3	83.9	84.1	83.4	87.1	86.9	92.5	94.0	96.8	85.6
1937	94.4	93.7	95.5	99.2	109.7	107.0	104.6	106.2	104.4	104.5	92.9	86.2	102.0
1938	75.0	76.9	77.1	74.6	72.9	70.5	70.6	76.9	81.0	83.8	84.1	86.5	77.5
1939	83.4	85.4	86.9	84.9	84.4	86.2							

Source of data: The computations were made by the United States Bureau of Labor Statistics, and are contained in their publications. The Pay Roll Indexes are reproduced in Survey of Current Business (Published by United States Department of Commerce, Bureau of Foreign and Domestic Commerce). The above figures were taken from the last named source.


CAR LOADINGS, STEEL INGOT PRODUCTION
AND
BUILDING CONTRACTS AWARDED INDEXES
COMPUTED NORMAL = 100
CHART NO. 9
CARLOADINGS, STEEL INGOT PRODUCTION AND BUILDING CONTRACTS AWARDED INDEXES
BUILDING CONTRACTS AWARDED
STEEL INGOT PRODUCTION
CARLOADINGS
STEEL INGOT PRODUCTION
CARLOADINGS
STEEL INGOT PRODUCTION
CARLOADINGS
BUILDING CONTRACTS AWARDED
BUILDING CONTRACTS AWARDED
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941

COMPUTED NORMAL = 100

CARLOADINGS

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1923	105.9	102.7	105.6	108.5	107.5	105.7	104.8	103.3	101.6	101.3	103.0	100.6	104.2
1924	101.6	104.7	101.5	99.1	96.7	92.5	94.8	97.1	100.3	101.5	101.9	101.6	99.4
1925	102.7	103.7	102.6	103.7	103.9	101.4	103.1	105.4	104.5	102.2	105.6	107.8	103.9
1926	104.7	104.5	104.2	104.3	107.9	106.8	107.8	107.1	107.6	108.6	107.0	105.9	106.4
1927	103.7	106.6	106.0	107.4	106.2	105.5	104.1	105.2	105.0	102.4	97.5	95.4	103.9
1928	101.4	102.5	104.8	104.9	107.3	104.0	106.6	107.5	109.0	108.5	105.2	105.5	105.6
1929	106.8	108.9	109.1	113.8	112.9	113.5	112.8	113.4	112.8	108.4	101.6	100.8	109.6
1930	102.2	104.5	102.6	105.3	103.1	100.8	98.9	97.4	94.6	91.5	87.7	87.1	97.9
1931	87.3	86.5	85.8	89.6	87.9	85.9	84.8	81.2	76.6	77.6	76.4	78.7	83.0
1932	74.1	71.7	69.8	68.9	63.2	63.5	60.9	61.5	66.7	72.0	71.0	71.9	67.9
1933	71.9	68.7	69.2	70.8	75.0	82.5	86.6	80.1	77.5	76.8	77.2	83.0	76.1
1934	86.0	87.4	89.1	85.8	85.0	85.7	80.2	77.0	75.7	74.7	76.6	82.4	82.2
1935	87.1	88.3	86.7	82.7	79.3	80.2	76.3	78.1	80.4	84.8	87.3	93.7	83.7
1936	90.9	89.2	87.4	91.0	93.1	92.3	95.1	93.0	94.7	97.2	102.8	101.3	94.0
1937	95.1	103.1	100.2	101.7	108.9	100.2	104.0	101.7	99.4	96.1	86.2	78.3	97.9
1938	79.5	74.9	74.2	69.7	69.3	70.6	72.9	74.4	78.1	81.5	84.2	84.2	76.1
1939	82.8	79.3	80.1	76.5	77.8	80.9							

Note: The above figures are adjusted for secular trend and seasonal variation.

Source of data: The computations were made by The Annalist (Published by the New York Time's Company) and are contained in this publication. The figures are reproduced in various issues of Survey of Current Business (Publication of United States Department of Commerce). The above indexes were taken direct from The Annalist and from the Survey of Current Business.

36672

EXHIBIT NO. 13
PAGE 1
CARLOADING INDEX

COMPUTED NORMAL = 100

STEEL INGOT PRODUCTION

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	115.0	122.7	121.3	102.5	114.2	118.3	112.4	118.7	116.8	116.4	101.0	92.9	112.7
1921	79.7	64.6	49.4	42.3	47.1	39.3	35.5	43.1	45.9	58.6	59.2	53.9	51.6
1922	93.4	81.9	75.3	90.5	97.1	101.2	103.2	84.0	92.4	105.7	105.3	107.7	90.0
1923	107.7	104.7	105.6	119.6	123.4	119.6	120.5	114.2	111.3	104.5	96.7	91.7	109.8
1924	98.5	107.4	109.3	92.2	75.2	70.2	69.4	82.3	89.2	89.6	96.8	107.4	90.3
1925	111.1	106.8	105.3	95.5	99.2	99.3	98.5	105.2	105.4	108.7	119.1	116.9	105.9
1926	111.8	105.5	105.8	107.3	109.2	111.7	111.2	117.7	113.8	115.8	108.5	102.8	110.1
1927	101.3	104.3	106.0	105.1	104.4	101.9	99.4	96.7	92.7	93.1	92.2	97.0	99.8
1928	107.3	104.8	103.8	112.1	104.2	105.2	113.1	110.6	118.4	122.7	122.2	123.5	112.5
1929	117.2	116.4	121.9	122.5	126.5	137.1	133.7	127.2	126.4	117.8	101.3	96.2	120.4
1930	98.2	100.8	99.1	98.4	93.0	92.4	80.4	80.9	75.6	70.1	68.6	66.2	85.8
1931	65.0	66.7	70.6	65.3	61.2	53.6	50.1	44.5	40.2	40.3	46.3	38.8	53.6
1932	39.4	37.1	31.7	29.3	26.7	22.5	21.8	20.9	25.4	24.2	28.3	25.1	28.0
1933	28.6	27.9	19.8	32.5	45.0	62.1	64.4	70.2	57.7	53.4	40.3	52.8	47.7
1934	49.6	57.2	61.8	70.6	76.4	72.8	39.1	33.6	33.1	36.2	41.8	56.2	52.4
1935	70.3	71.1	66.1	60.8	57.9	58.1	56.6	70.7	73.5	76.4	80.7	86.1	68.7
1936	73.0	71.8	77.1	90.3	90.6	91.1	96.5	105.2	106.0	110.5	114.1	117.1	96.1
1937	116.3	111.9	116.8	116.0	114.4	97.9	110.6	119.1	103.2	82.3	58.3	38.7	96.5
1938	43.3	44.0	45.0	43.9	39.6	38.3	48.7	56.2	62.0	74.4	91.3	83.3	55.8
1939	79.7	77.6	76.1	70.4	81.1	72.7	79.3						

Note: The above figures are adjusted for secular trend and seasonal variation.
Source of data: The computations were made by the Standard Statistics Company, Inc., and are contained in their publication, Standard Trade and Securities, Volume 3, page B-26, dated June 5, 1936, and Current Statistics Section.

3669

SCHEDULE NO. 13
PAGE 2

STEEL INGOT PRODUCTION
INDEX

[redacted]

CORRECTED NORMAL = 100

BUILDING CONTRACTS AWARDED

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	141.6	125.7	131.3	113.7	90.1	86.0	73.1	77.0	71.9	66.3	62.3	57.5	91.4
1921	67.4	73.2	90.5	63.6	69.4	82.7	84.7	85.9	110.1	109.0	105.4	118.2	94.0
1922	103.9	106.9	111.7	123.6	128.9	146.0	137.7	133.2	118.0	116.7	126.6	117.6	122.9
1923	121.3	136.6	132.4	131.9	135.4	113.1	112.5	102.1	103.7	135.1	130.6	130.1	125.7
1924	147.0	145.8	160.9	127.2	126.3	114.2	101.8	105.8	113.7	118.8	120.2	126.4	126.3
1925	129.5	127.8	129.2	143.8	108.5	151.8	173.3	122.3	121.3	126.0	109.1	107.2	125.2
1926	157.3	137.7	145.9	143.4	146.4	140.7	156.4	145.2	147.3	135.8	141.1	138.1	142.8
1927	131.4	135.1	144.4	133.7	123.6	138.9	127.7	137.3	123.2	139.5	134.0	135.8	134.5
1928	148.6	156.7	149.1	156.8	162.0	165.1	149.5	144.5	142.9	151.3	142.7	136.6	150.5
1929	137.7	125.4	128.5	135.1	130.9	120.2	131.2	118.2	108.8	108.6	100.6	96.7	118.2
1930	84.8	91.8	88.4	82.8	79.3	75.9	73.7	64.3	73.8	60.1	66.9	65.6	75.8
1931	57.2	62.1	60.3	60.9	57.3	56.7	55.7	58.5	58.5	58.9	58.5	53.6	58.0
1932	49.0	48.6	46.7	41.7	43.4	50.2	45.0	42.9	42.9	47.2	50.0	43.7	45.8
1933	18.0	13.9	16.2	17.0	22.6	25.9	22.7	21.1	22.2	23.4	20.3	24.1	20.7
1934	18.8	14.5	23.2	23.4	22.3	24.0	20.0	22.3	20.3	23.0	21.9	24.1	21.4
1935	19.6	16.7	21.7	21.0	23.3	26.0	31.6	23.5	23.4	25.0	26.9	28.1	23.9
1936	26.7	24.8	27.6	28.4	29.4	26.2	29.3	26.6	26.6	28.0	29.2	27.6	27.6
1937	24.3	22.2	24.3	25.9	21.6	23.0	20.5	24.0	24.2	24.0	24.2	22.6	23.4
1938	20.6	21.9	19.0	16.2	18.8	21.1	16.7	24.6	57.3	75.0	70.7	68.2	32.9
1939	54.5	53.6	68.8	62.1	64.2	60.1	63.0						

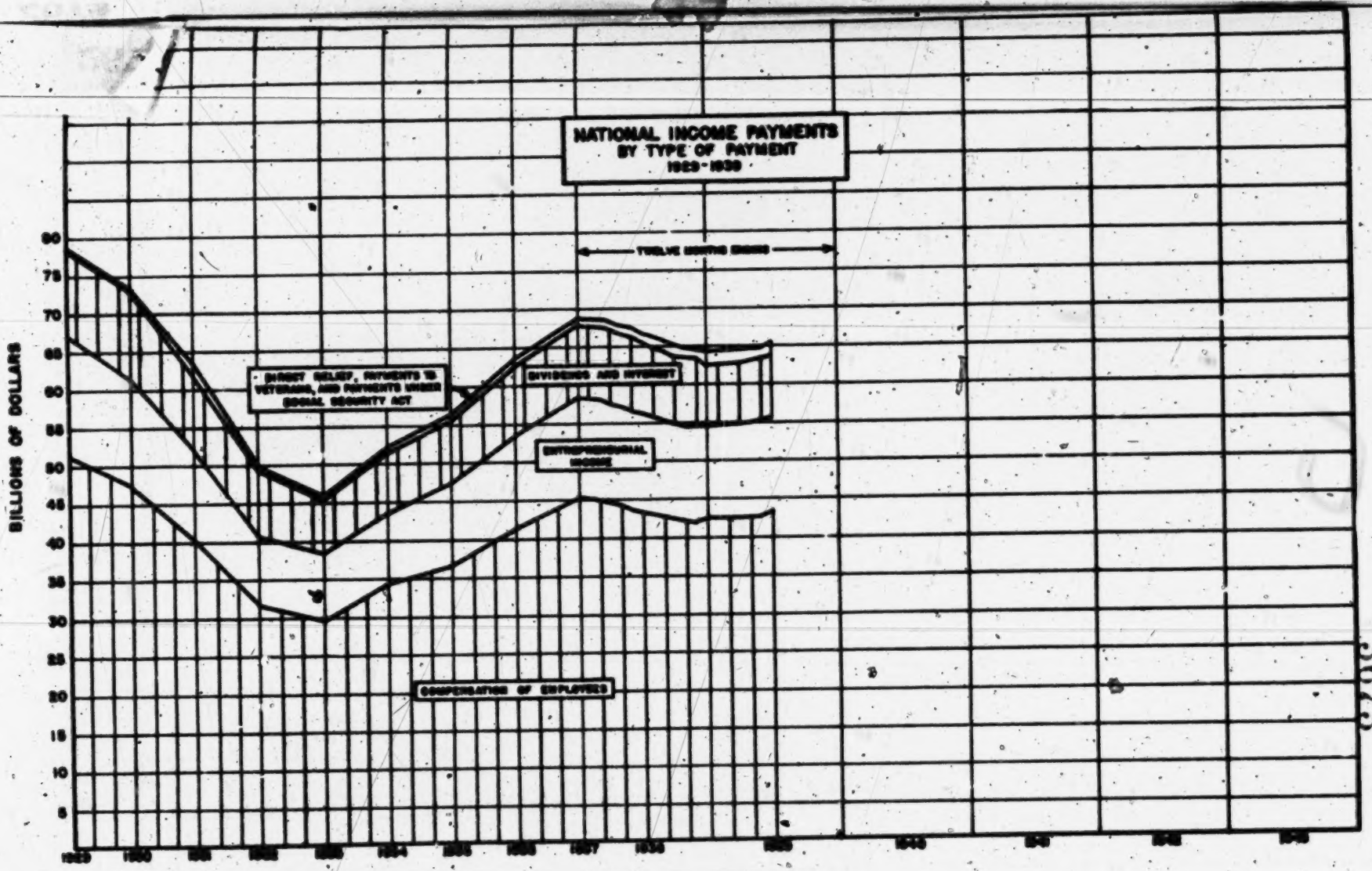
Note: The above figures are adjusted for secular trend and seasonal variation.

Source of data: The computations were made by the Standard Statistics Company, Inc., and are contained in their publication, Standard Trade and Securities, Volume 3, page D-33, dated June 5, 1936, and Current Statistics Section.

3671

SCHEDULE NO. 11
PART 5

BUILDING CONTRACTS AWARDED INDEX


NATIONAL INCOME PAYMENTS
BY TYPE OF PAYMENT
1929-1939
TWELVE MONTHS ENDING
BILLIONS OF DOLLARS
DIRECT RELIEF, PAYMENTS TO VETERANS, AND PAYMENTS UNDER SOCIAL SECURITY ACT
DIVIDENDS AND INTEREST
ENTREPRENEURIAL INCOME
COMPENSATION OF EMPLOYEES
90
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943

3673

NATIONAL INCOME PAYMENTS
YEARS 1929 TO 1937, INCLUSIVE
[MILLIONS OF DOLLARS]

Year or Period	Total Income Payments	Compensation of Employees	Entrepreneurial Withdrawals and Net Rents and Royalties	Dividends and Interest	Direct and Other Relief (A)	Payments to Veterans (B)	Benefit Payments under Social Security Act (C)
Year							
1929	78,574	51,478	15,717	11,331	48	-	-
1930	73,350	47,522	14,346	11,396	86	-	-
1931	63,117	40,161	11,931	9,913	205	907	-
1932	49,597	31,542	9,445	8,017	446	147	-
1933	45,921	29,591	8,634	7,088	554	54	-
1934	52,223	34,048	9,711	7,748	690	86	-
1935	56,086	36,666	10,680	7,812	949	19	-
1936	64,447	41,395	11,880	8,881	664	1,427	-
1937	68,972	45,364	13,040	9,563	877	128	-
12 Months Ended							
1937							
Jan.	68,912	45,223	13,065	9,609	900	110	-
Feb.	68,699	44,987	13,062	9,554	983	97	9
Mar.	68,361	44,668	13,015	9,562	944	84	36
Apr.	67,918	44,295	12,967	9,494	964	76	82
May	67,495	43,881	12,980	9,444	982	67	134
June	66,804	43,420	12,880	9,242	1,003	59	181
July	66,230	43,006	12,770	9,117	1,022	57	230
Aug.	65,731	42,619	12,694	9,059	1,038	55	278
Sept.	65,185	42,334	12,566	8,889	1,051	20	333
Oct.	64,802	42,105	12,479	8,718	1,061	12	385
Nov.	64,699	42,037	12,421	8,702	1,066	6	457
Dec.	64,200	42,096	12,348	8,185	1,067	-	503
1938							
Jan.	64,225	42,232	12,299	8,093	1,068	-	533
Feb.	64,343	42,387	12,265	8,071	1,069	-	551
Mar.	64,533	42,563	12,255	8,096	1,070	-	559
Apr.	64,629	42,696	12,250	8,054	1,072	-	557
May	64,787	42,849	12,251	8,049	1,077	-	561
June	65,117	43,091	12,253	8,128	1,079	-	566

Source of Data: Statistics compiled by the U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, and published in Survey of Current Business. The above data for the years 1929 to 1937, inclusive, were taken from, and the twelve-months' moving totals for the years 1938 and 1937 are based on, the monthly figures contained in the aforementioned publication. For the sources and methods used in developing the statistics, see pp. 15-20 of the October, 1938 issue of Survey of Current Business.

Notes: (A) Includes Social Security benefits prior to 1938.
(B) Subsequent to December 1937, cash payments to veterans are included with direct relief.
(C) Includes benefits paid to retired railroad employees under Railroad Retirement Act.

2677

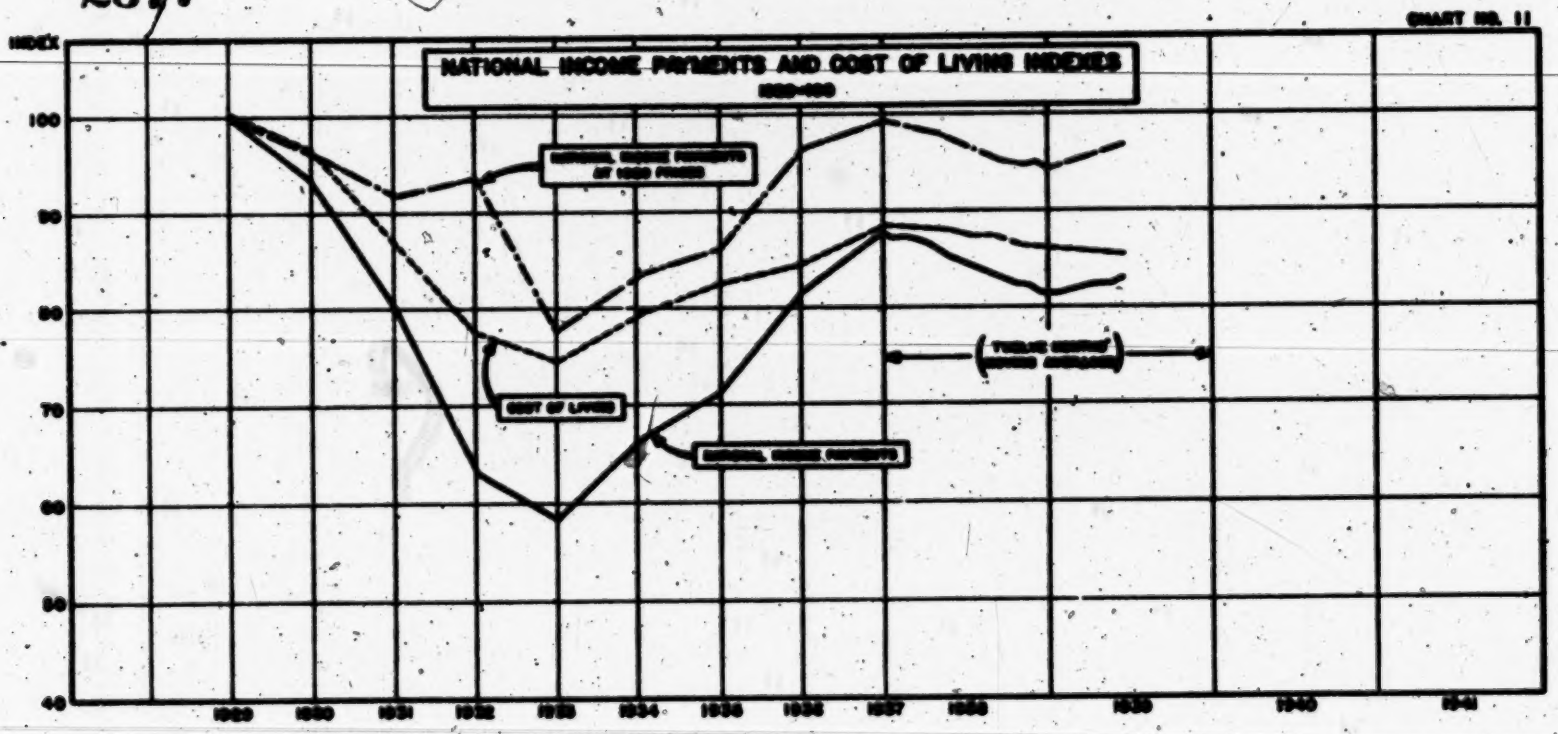


CHART NO. 11
NATIONAL INCOME PAYMENTS AND COST OF LIVING INDEXES
INDEX
100
90
80
70
60
50
40
COST OF LIVING
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941

2677

Year or Period (a)	National Income Payments (1) (1929=100) (b)	Cost of Living(2) (Monthly Average 1923=100) (c)	National Income Payments At 1929 Prices (d)=(b) ÷ (c)
Year			
1929	100.0	100.1	100.0
1930	93.4	96.7	96.6
1931	80.3	87.2	92.1
1932	63.1	77.9	81.0
1933	58.4	74.9	77.9
1934	66.4	79.4	83.6
1935	71.3	82.6	86.3
1936	81.9	84.8	96.5
1937	87.8	88.5	99.2
2 Mos.Ended			
1938			
Jan. 31	87.7	88.6	99.0
Feb. 28	87.4	88.5	98.7
Mar. 31	87.0	88.4	98.4
Apr. 30	86.4	88.3	97.8
May 31	85.8	88.1	97.4
June 30	85.0	87.9	96.7
July 31	84.3	87.7	96.1
Aug. 31	83.7	87.5	95.6
Sept.30	83.0	87.2	95.2
Oct. 31	82.5	86.9	94.9
Nov. 30	82.3	86.6	95.0
Dec. 31	81.7	86.4	94.5
1939			
Jan. 31	81.7	86.2	94.8
Feb. 28	81.9	86.1	95.1
Mar. 31	82.1	85.9	95.6
Apr. 30	82.3	85.8	95.9
May 31	82.5	85.6	96.4
June 30	82.9	85.5	96.9

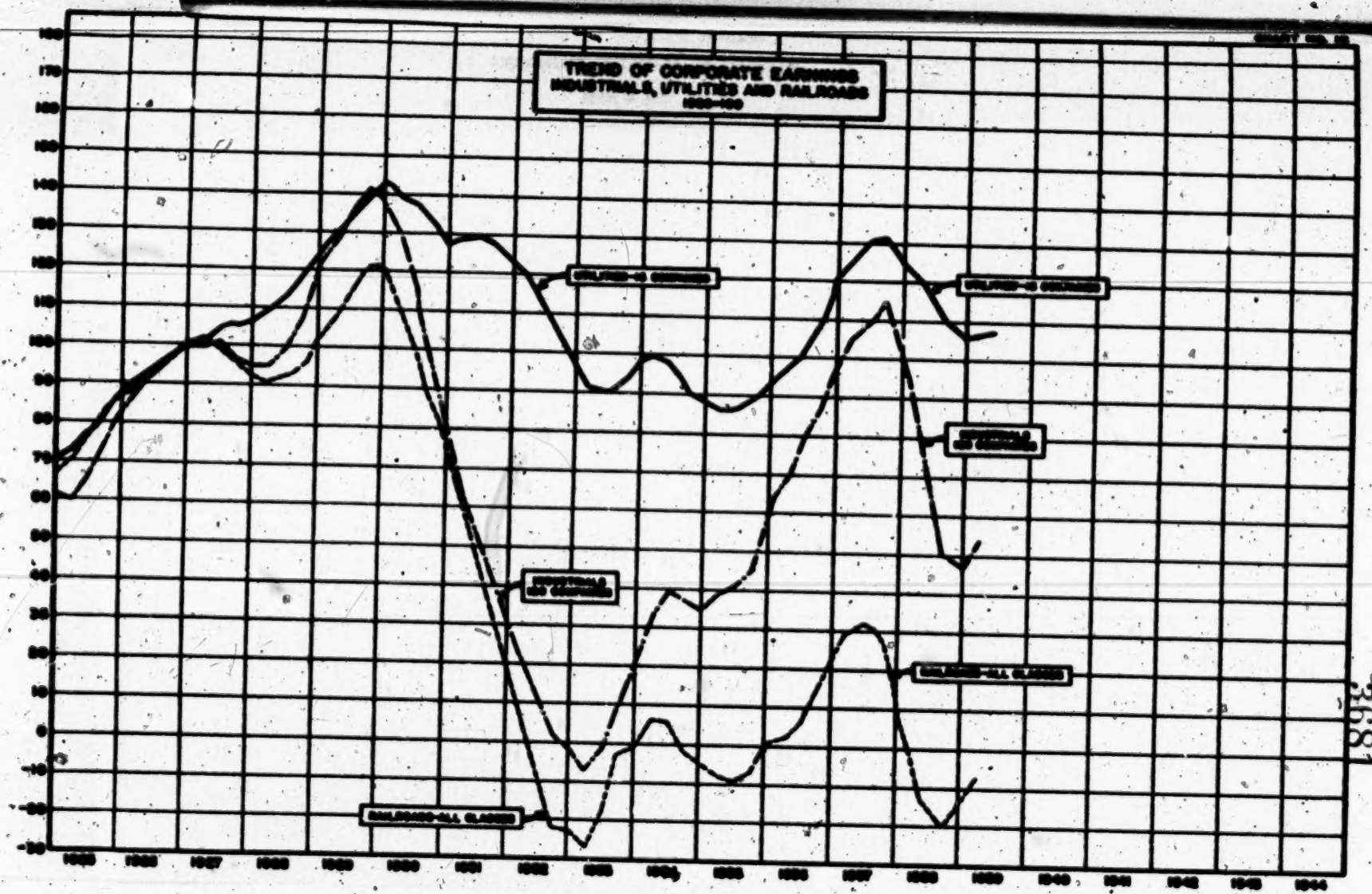
Source of Data:

(1) Statistics compiled by the U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, and published in Survey of Current Business.

(2) Statistics compiled by the National Industrial Conference Board and reproduced in Survey of Current Business.

Note: The monthly index figures for 1938 and 1939 represent twelve-months' moving averages computed from the monthly figures contained in the aforementioned publication.

2679


TREND OF CORPORATE EARNINGS
INDUSTRIALS, UTILITIES AND RAILROADS

3681

TREND OF CORPORATE EARNINGS

INDUSTRIALS, UTILITIES AND RAILROADS

1926 = 100

INDUSTRIALS (120 COMPANIES)

Quarterly Earnings				Moving Average of Earnings				Quarterly Earnings				Moving Average of Earnings			
78.5	51.6	48.2	66.1	Year ended	Dec. 31,	1924	61.1	94.9	72.0	52.5	45.6	Year ended	Mar. 31,	1931	66.3
51.6	48.2	66.1	74.2	" "	Mar. 31,	1925	60.0	72.0	52.5	45.6	48.1	" "	June 30,	"	54.6
48.2	66.1	74.2	78.3	" "	June 30,	"	66.7	52.5	45.6	48.1	33.9	" "	Sept. 30,	"	45.0
66.1	74.2	78.3	83.4	" "	Sept. 30,	"	75.5	45.6	48.1	33.9	3.2	" "	Dec. 31,	"	32.7
74.2	78.3	83.4	94.7	" "	Dec. 31,	"	82.7	48.1	33.9	3.2	8.4	" "	Mar. 31,	1932	23.4
78.3	83.4	94.7	98.8	" "	Mar. 31,	1926	86.8	33.9	3.2	8.4	5.4	" "	June 30,	"	12.7
83.4	94.7	98.8	92.1	" "	June 30,	"	92.3	3.2	8.4	5.4	(6.3)	" "	Sept. 30,	"	2.7
94.7	98.8	92.1	103.2	" "	Sept. 30,	"	97.2	8.4	5.4	(6.3)	(12.7)	" "	Dec. 31,	"	(1.5)
98.8	92.1	103.2	105.8	" "	Dec. 31,	"	100.0	5.4	(6.3)	(12.7)	(12.6)	" "	Mar. 31,	1933	(6.6)
92.1	103.2	105.8	98.3	" "	Mar. 31,	1927	99.9	(6.3)	(12.7)	(12.6)	25.8	" "	June 30,	"	(1.5)
103.2	105.8	98.3	94.2	" "	June 30,	"	100.4	(12.7)	(12.6)	25.8	43.8	" "	Sept. 30,	"	11.1
105.8	98.3	94.2	92.7	" "	Sept. 30,	"	97.8	(12.6)	25.8	43.8	28.6	" "	Dec. 31,	"	21.4
98.3	94.2	92.7	89.4	" "	Dec. 31,	"	93.7	25.8	43.8	28.6	37.4	" "	Mar. 31,	1934	33.9
94.2	92.7	89.4	106.7	" "	Mar. 31,	1928	95.6	43.8	28.6	37.4	49.1	" "	June 30,	"	39.7
92.7	89.4	106.7	110.6	" "	June 30,	"	99.9	28.6	37.4	49.1	33.2	" "	Sept. 30,	"	37.1
89.4	106.7	110.6	124.5	" "	Sept. 30,	"	107.8	37.4	49.1	33.2	22.8	" "	Dec. 31,	"	35.6
106.7	110.6	124.5	135.9	" "	Dec. 31,	"	121.9	49.1	33.2	22.8	49.7	" "	Mar. 31,	1935	38.7
110.6	124.5	135.9	138.2	" "	Mar. 31,	1929	127.3	33.2	22.8	49.7	55.6	" "	June 30,	"	50.3
124.5	135.9	138.2	143.9	" "	June 30,	"	135.6	22.8	49.7	55.6	51.5	" "	Sept. 30,	"	44.9
135.9	138.2	143.9	145.2	" "	Sept. 30,	"	140.8	49.7	55.6	51.5	92.7	" "	Dec. 31,	"	62.4
138.2	143.9	145.2	126.3	" "	Dec. 31,	"	137.9	55.6	51.5	92.7	75.2	" "	Mar. 31,	1936	68.8
143.9	145.2	126.3	106.5	" "	Mar. 31,	1930	130.0	51.5	92.7	75.2	96.0	" "	June 30,	"	78.9
145.2	126.3	106.5	94.9	" "	June 30,	"	117.7	92.7	75.2	96.0	83.6	" "	Sept. 30,	"	86.9
126.3	106.5	94.9	72.0	" "	Sept. 30,	"	99.4	75.2	96.0	83.6	130.7	" "	Dec. 31,	"	96.4
106.5	94.9	72.0	58.5	" "	Dec. 31,	"	81.5								

SCHEDULE NO.16
PAGE 1
TREND OF EARNINGS-INDUSTRIALS

3683

2681

TREND OF CORPORATE EARNINGS

INDUSTRIALS, UTILITIES AND RAILROADS

1926 = 100

INDUSTRIALS (120 COMPANIES)

Quarterly Earnings				Moving Average of Earnings			
96.0	83.6	130.7	109.6	Year ended Mar. 31, 1937			105.0
83.6	130.7	109.6	113.5	" " June 30, "			109.4
130.7	109.6	113.5	104.4	" " Sept.30, "			114.6
109.6	113.5	104.4	92.8	" " Dec. 31, "			105.1
113.5	104.4	92.8	38.7	" " Mar. 31, 1938			87.4
104.4	92.8	38.7	35.8	" " June 30, "			67.9
92.8	38.7	35.8	32.2	" " Sept.30, "			49.9
38.7	35.8	32.2	79.0	" " Dec. 31, "			96.4
35.8	32.2	79.0	64.7	" " Mar. 31, 1939			53.9

3685
EXHIBIT NO. 915
FILED BY
FEDERAL TRADE COMMISSION

2682

TREND OF CORPORATE EARNINGS

INDUSTRIALS, UTILITIES AND RAILROADS

1926 = 100

UTILITIES (15 COMPANIES)

Quarterly Earnings				Moving Averages			
67.5	68.4	69.5	75.6	Year ended	Dec. 31,	1924	70.3
68.4	69.5	75.6	79.9	" "	Mar. 31,	1925	73.3
69.5	75.6	79.9	84.4	" "	June 30,	"	77.4
75.6	79.9	84.4	90.5	" "	Sept.30,	"	82.6
79.9	84.4	90.5	94.4	" "	Dec. 31,	"	87.3
84.4	90.5	94.4	95.0	" "	Mar. 31,	1926	91.1
90.5	94.4	95.0	96.2	" "	June 30,	"	94.0
94.4	95.0	96.2	103.9	" "	Sept.30,	"	97.4
95.0	96.2	103.9	104.8	" "	Dec. 31,	"	100.0
96.2	103.9	104.8	102.4	" "	Mar. 31,	1927	101.8
103.9	104.8	102.4	107.1	" "	June 30,	"	104.6
104.8	102.4	107.1	108.6	" "	Sept.30,	"	105.8
102.4	107.1	108.6	109.2	" "	Dec. 31,	"	106.8
107.1	108.6	109.2	114.8	" "	Mar. 31,	1928	109.9
108.6	109.2	114.8	120.4	" "	June 30,	"	113.3
109.2	114.8	120.4	128.2	" "	Sept.30,	"	118.2
114.8	120.4	128.2	132.4	" "	Dec. 31,	"	124.0
120.4	128.2	132.4	137.2	" "	Mar. 31,	1929	129.6
128.2	132.4	137.2	138.1	" "	June 30,	"	134.0
132.4	137.2	138.1	146.1	" "	Sept.30,	"	138.5
137.2	138.1	146.1	146.5	" "	Dec. 31,	"	142.5
138.1	146.1	146.5	125.1	" "	Mar. 31,	1930	139.5
146.1	146.5	125.1	130.1	" "	June 30,	"	137.5
146.5	125.1	130.1	129.9	" "	Sept.30,	"	133.4
125.1	130.1	129.9	125.7	" "	Dec. 31,	"	127.7

Quarterly Earnings				Moving Averages			
130.1	129.9	125.7	129.4	Year ended	Mar. 31,	1931	128.8
129.9	125.7	129.4	131.8	" "	June 30,	"	129.2
125.7	129.4	131.8	121.6	" "	Sept.30,	"	127.2
129.4	131.8	121.6	111.1	" "	Dec. 31,	"	123.5
131.8	121.6	111.1	111.1	" "	Mar. 31,	1932	118.9
121.6	111.1	111.1	102.1	" "	June 30,	"	111.5
111.1	111.1	102.1	92.7	" "	Sept.30,	"	104.7
111.1	102.1	92.7	80.3	" "	Dec. 31,	"	96.6
102.1	92.7	80.3	89.3	" "	Mar. 31,	1933	91.1
92.7	80.3	89.3	96.7	" "	June 30,	"	90.3
80.3	89.3	96.7	107.4	" "	Sept.30,	"	93.9
89.3	96.7	107.4	97.4	" "	Dec. 31,	"	98.2
96.7	107.4	97.4	98.6	" "	Mar. 31,	1934	99.8
107.4	97.4	95.6	86.3	" "	June 30,	"	96.7
97.4	98.6	86.3	82.5	" "	Sept.30,	"	90.5
98.6	86.3	82.5	88.1	" "	Dec. 31,	"	88.2
86.3	82.5	88.1	88.4	" "	Mar. 31,	1935	86.3
82.5	88.1	88.4	88.0	" "	June 30,	"	86.8
88.1	88.4	88.0	93.9	" "	Sept.30,	"	89.6
88.4	88.0	93.9	101.1	" "	Dec. 31,	"	92.9
88.0	93.9	101.1	102.2	" "	Mar. 31,	1936	96.3
93.9	101.1	102.2	109.6	" "	June 30,	"	101.7
101.1	102.2	109.6	123.9	" "	Sept.30,	"	109.2
102.2	109.6	123.9	147.2	" "	Dec. 31,	"	120.7

3687

EXHIBIT NO. 15
FILE 3
TREND OF EARNINGS - UTILITIES

TREND OF CORPORATE EARNINGS

INDUSTRIALS, UTILITIES AND RAILROADS

1926 = 100

UTILITIES (15 COMPANIES)

Quarterly Earnings				Moving Average			
109.6	123.9	147.2	121.3	Year ended	Mar. 31,	1937	125.5
123.9	147.2	121.3	127.7	"	June 30,	"	130.0
147.2	121.3	127.7	127.7	"	Sept.30,	"	131.0
121.3	127.7	127.7	126.3	"	Dec. 31,	"	125.8
127.7	127.7	126.3	102.0	"	Mar. 31,	1938	120.9
127.7	126.3	102.0	104.0	"	June 30,	"	115.0
126.3	102.0	104.0	104.8	"	Sept.30,	"	109.3
102.0	104.0	104.8	113.2	"	Dec. 31,	"	106.0
104.0	104.8	113.2	113.4	"	Mar. 31,	1939	106.9

EXHIBIT NO. 15
FILED
TREND OF
EARNINGS
UTILITIES

INDUSTRIALS, UTILITIES AND RAILROADS

1926 = 100

RAILROADS (ALL CLASS 1 RAILS)

Quarterly Barrings				Moving Average of Barrings				Quarterly Barrings				Moving Average of Barrings			
76.1	55.0	60.4	81.1	Year ended	Dec.	31,	1934	82.6	70.1	46.0	23.6	Year ended	Mar.	31,	1951
55.0	60.4	81.1	83.6	"	Mar.	31,	1935	70.1	46.0	23.6	32.1	"	June	30,	"
60.4	81.1	83.6	81.2	"	June	30,	"	46.0	23.6	32.1	21.4	"	Sept.	30,	"
81.1	83.6	81.2	89.4	"	Sept.	30,	"	23.6	32.1	21.4	9.7	"	Dec.	31,	"
83.6	81.2	89.4	89.4	"	Dec.	31,	"	32.1	21.4	9.7	(25.0)	"	Mar.	31,	1952
81.2	89.4	89.4	96.1	"	Mar.	31,	1936	21.4	9.7	(25.0)	(36.7)	"	June	30,	"
89.4	89.4	96.1	99.4	"	June	30,	"	9.7	(25.0)	(36.7)	(32.7)	"	Sept.	30,	"
89.4	96.1	99.4	101.9	"	Sept.	30,	"	(25.0)	(36.7)	(32.7)	7.6	"	Dec.	31,	"
96.1	99.4	101.9	102.4	"	Dec.	31,	"	(36.7)	(32.7)	7.6	(43.6)	"	Mar.	31,	1953
99.4	101.9	102.4	103.5	"	Mar.	31,	1937	(32.7)	7.6	(43.6)	(3.5)	"	June	30,	"
101.9	102.4	103.5	89.6	"	June	30,	"	7.6	(43.6)	(3.5)	29.7	"	Sept.	30,	"
102.4	103.5	89.6	88.1	"	Sept.	30,	"	(43.6)	(3.5)	29.7	12.8	"	Dec.	31,	"
103.5	89.6	88.1	88.7	"	Dec.	31,	"	(3.5)	29.7	12.8	(7.0)	"	Mar.	31,	1954
89.6	88.1	88.7	100.4	"	Mar.	31,	1938	29.7	12.8	(7.0)	(4.2)	"	June	30,	"
88.1	88.7	100.4	93.5	"	June	30,	"	12.8	(7.0)	(4.2)	(9.0)	"	Sept.	30,	"
88.7	100.4	93.5	93.3	"	Sept.	30,	"	(7.0)	(4.2)	(9.0)	2.5	"	Dec.	31,	"
100.4	93.5	93.3	121.0	"	Dec.	31,	"	(4.2)	(9.0)	2.5	(19.9)	"	Mar.	31,	1955
93.5	93.3	121.0	116.2	"	Mar.	31,	1939	(9.0)	2.5	(19.9)	(10.1)	"	June	30,	"
93.3	121.0	116.2	124.5	"	June	30,	"	2.5	(19.9)	(10.1)	(4.0)	"	Sept.	30,	"
121.0	116.2	124.5	119.9	"	Sept.	30,	"	(19.9)	(10.1)	(4.0)	34.3	"	Dec.	31,	"
116.2	124.5	119.9	118.0	"	Dec.	31,	"	(10.1)	(4.0)	34.3	(12.8)	"	Mar.	31,	1956
124.5	119.9	118.0	80.3	"	Mar.	31,	1940	(4.0)	34.3	(12.8)	3.0	"	June	30,	"
119.9	118.0	80.3	82.8	"	June	30,	"	34.3	(12.8)	3.0	31.0	"	Sept.	30,	"
118.0	80.3	82.8	70.1	"	Sept.	30,	"	(12.8)	3.0	31.0	46.5	"	Dec.	31,	"
80.3	82.8	70.1	66.0	"	Dec.	31,	"	3.0	31.0	46.5					

SCHEDULE NO.14
PAGE 5

TRENDS OF INDUSTRIAL RAILROADS

3691

TREND OF CORPORATE EARNINGS

INDUSTRIALS, UTILITIES AND RAILROADS

1926 = 100

RAILROADS (ALL CLASS 1 RAILS)

Quarterly Earnings				Moving Average of Earnings			
3.0	31.0	68.5	13.1	Year ended Mar. 31,	1937		28.9
31.0	68.5	13.1	13.8	" " June 30,	"		31.6
68.5	13.1	13.8	19.2	" " Sept.30,	"		28.7
13.1	13.8	19.2	9.0	" " Dec. 31,	"		13.8
13.8	19.2	9.0	(39.0)	" " Mar. 31,	1938		(1.8)
19.2	9.0	(39.0)	(31.0)	" " June 30,	"		(15.5)
9.0	(39.0)	(31.0)	1.5	" " Sept.30,	"		(19.9)
(39.0)	(31.0)	1.5	29.2	" " Dec. 31,	"		(14.8)
(31.0)	1.5	29.2	(19.8)	" " Mar. 31,	1939		(7.5)

Note: The "Standard Trade and Securities" Index Numbers of Quarterly Earnings of Industrials, Utilities and Railroads have been reduced to twelve month moving averages. By this process, each quarterly index number is made to express an average of that of the quarter in question combined with those of the three preceding quarters. Seasonal variations are eliminated.

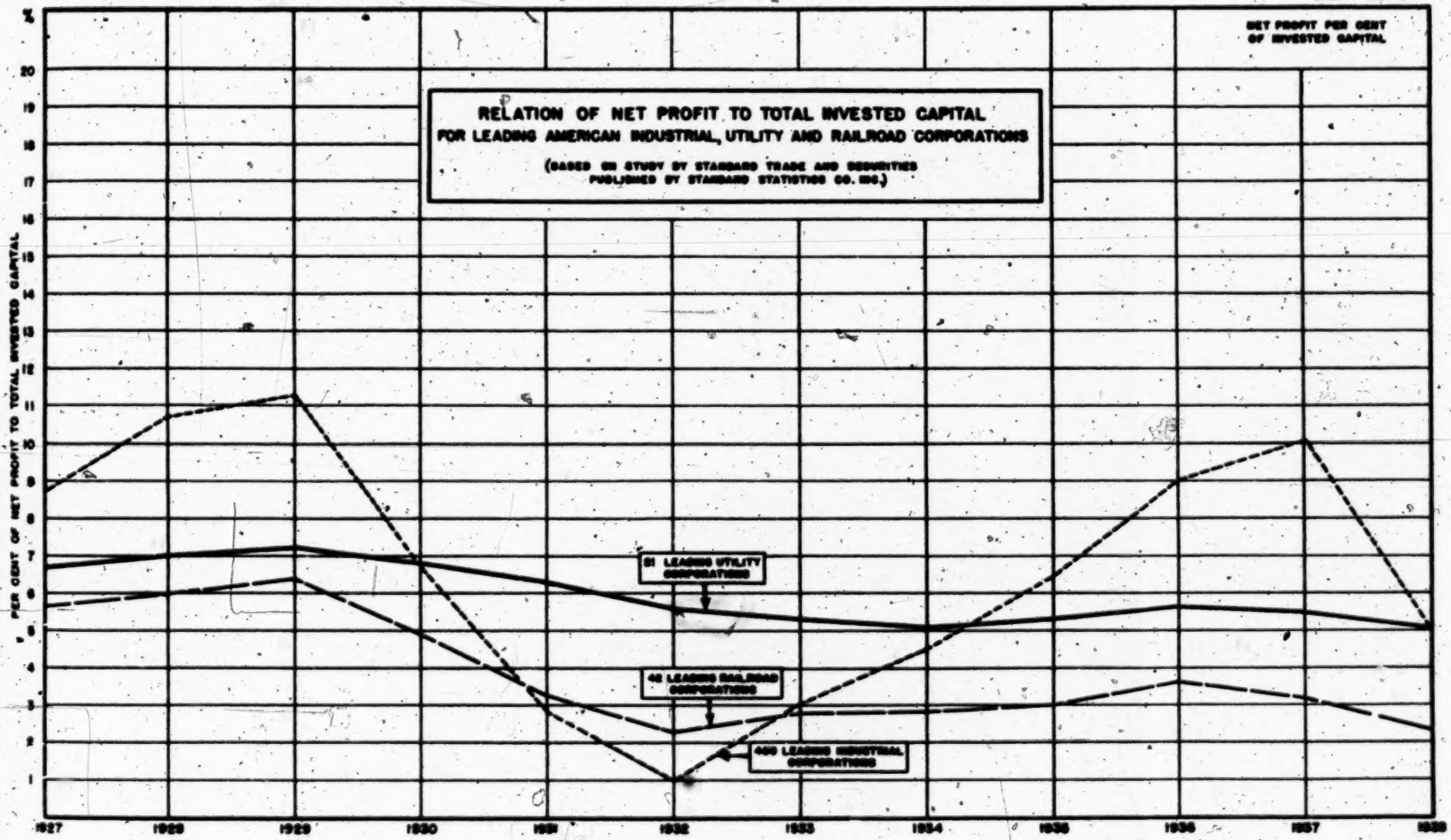
Source of Index Numbers of Quarterly Earnings: Standard Trade and Securities (Published by Standard Statistics Company, Inc.) Volume 3, Current Statistics Section.

3693

EXHIBIT NO. 16
FOR ID

TREND OF CORPORATE EARNINGS

CHART NO. 13


RELATION OF NET PROFIT TO TOTAL INVESTED CAPITAL
FOR LEADING AMERICAN INDUSTRIAL, UTILITY AND RAILROAD CORPORATIONS
(BASED ON STUDY BY STANDARD TRADE AND SECURITIES PUBLISHED BY STANDARD STATISTICS CO. INC.)
NET PROFIT PER CENT OF INVESTED CAPITAL
PER CENT OF NET PROFIT TO TOTAL INVESTED CAPITAL
%
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
31 LEADING UTILITY CORPORATIONS
48 LEADING RAILROAD CORPORATIONS
420 LEADING INDUSTRIAL CORPORATIONS
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938

2687

RELATION OF NET PROFIT TO TOTAL INVESTED CAPITAL FOR LEADING AMERICAN INDUSTRIAL, UTILITY AND RAILROAD CORPORATIONS

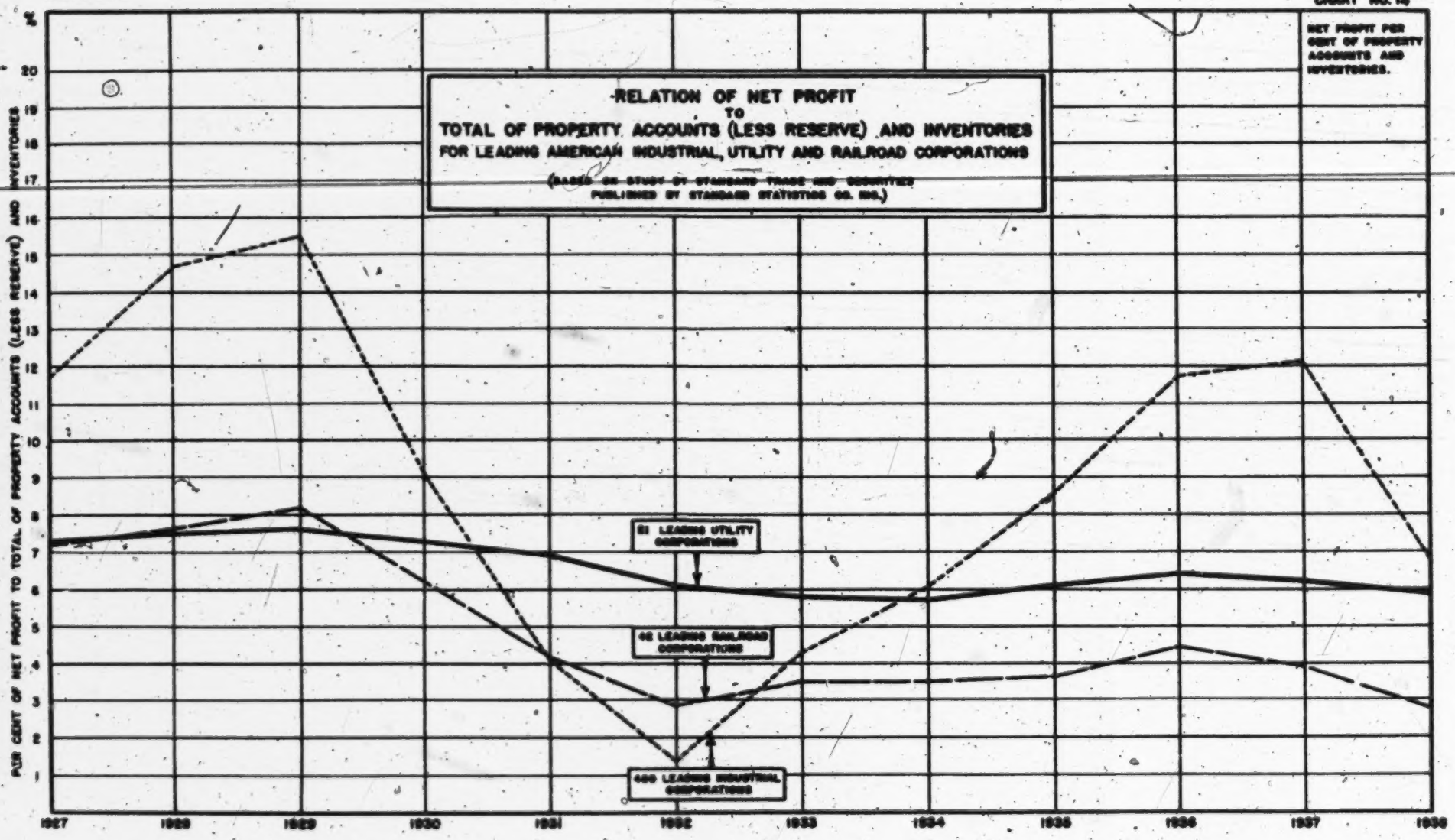
Units: $1,000,000

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
400 Leading Industrial Corporations												
Total Invested Capital	$25,168	$26,814	$28,803	$29,451	$28,092	$26,176	$26,653	$24,921	$24,710	$25,150	$25,181	$26,582
Net Profit	2,193	2,849	3,255	1,985	817	292	793	1,116	1,579	2,275	2,539	1,358
% of Net Profit to Total Invested Capital	8.7%	10.7%	11.3%	6.6%	2.9%	0.9%	3.0%	4.5%	6.4%	9.0%	10.1%	5.1%
21 Leading Utility Corporations												
Total Invested Capital	$ 6,695	$ 7,470	$ 8,119	$ 8,929	$ 9,339	$ 9,431	$ 9,113	$ 8,761	$ 8,778	$ 8,982	$ 8,529	$ 8,699
Net Profit	447	526	587	604	588	518	482	463	462	473	467	440
% of Net Profit to Total Invested Capital	6.7%	7.0%	7.2%	6.8%	6.3%	5.5%	5.3%	5.1%	5.3%	5.6%	5.5%	5.1%

2693

2689

CHART NO. 14



RELATION OF NET PROFIT TO TOTAL OF PROPERTY ACCOUNTS (LESS RESERVE) AND INVENTORIES FOR LEADING AMERICAN INDUSTRIAL, UTILITY AND RAILROAD CORPORATIONS

UNIT: $1,000,000

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
300 Leading Industrial Corporations												
Property Accounts (Less Reserve)	($13,781)	$14,286	$15,273	$16,437	$16,439	$15,475	$14,830	$14,249	$13,916	$14,178	$14,863	$14,571
Inventories	5,014	5,206	5,824	5,347	4,577	3,819	4,231	4,907	4,763	5,838	6,103	5,868
Total	$18,795	$19,492	$21,097	$21,784	$20,916	$19,294	$19,061	$19,156	$18,679	$19,916	$20,966	$20,439
Net Profit	2,153	2,849	3,855	1,945	817	642	793	1,116	1,579	2,275	2,534	1,358
% of Net Profit to Property Accounts and Inventories	11.7%	14.6%	15.4%	8.9%	3.9%	1.3%	4.2%	6.0%	8.5%	11.7%	12.1%	6.6%
21 Leading Utility Corporations												
Property Accounts (Less Reserve)	$ 5,910	$ 6,670	$ 7,518	$ 8,104	$ 8,367	$ 8,367	$ 8,234	$ 7,999	$ 7,902	$ 7,907	$ 7,772	$ 7,288
Inventories	133	142	160	161	150	113	114	116	118	126	126	116
Total	$ 6,043	$ 7,012	$ 7,678	$ 8,265	$ 8,517	$ 8,480	$ 8,348	$ 8,115	$ 7,980	$ 8,033	$ 7,898	$ 7,404
Net Profit	447	526	587	604	588	514	402	443	462	473	467	400
% of Net Profit to Property Accounts and Inventories	7.4%	7.5%	7.6%	7.3%	6.9%	6.1%	5.0%	5.7%	6.1%	6.1%	6.0%	5.4%

3703

2691

RELATION OF NET PROFIT TO TOTAL OF PROPERTY ACCOUNTS (LESS RESERVES) AND INVENTORIES FOR LEADING AMERICAN INDUSTRIAL, UTILITY AND RAILROAD CORPORATIONS

Units: $1,000,000

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
42 Leading Railroad Corporations												
Property Accounts (Less Reserve)	$14,576	$14,823	$15,176	$15,601	$15,939	$15,718	$15,990	$15,899	$15,163	$15,141	$15,285	$15,106
Inventories	419	373	372	352	328	299	281	296	331	352	341	360
Total	$14,995	$15,196	$15,548	$15,953	$16,267	$16,017	$15,791	$15,995	$15,494	$15,493	$15,626	$15,466
Net Profit	1,082	1,153	1,269	990	698	462	556	593	560	611	609	444
% of Net Profit to Property Accounts and Inventories	7.2%	7.6%	8.2%	6.2%	4.2%	2.9%	3.5%	3.7%	3.6%	4.4%	3.9%	2.8%

Note:

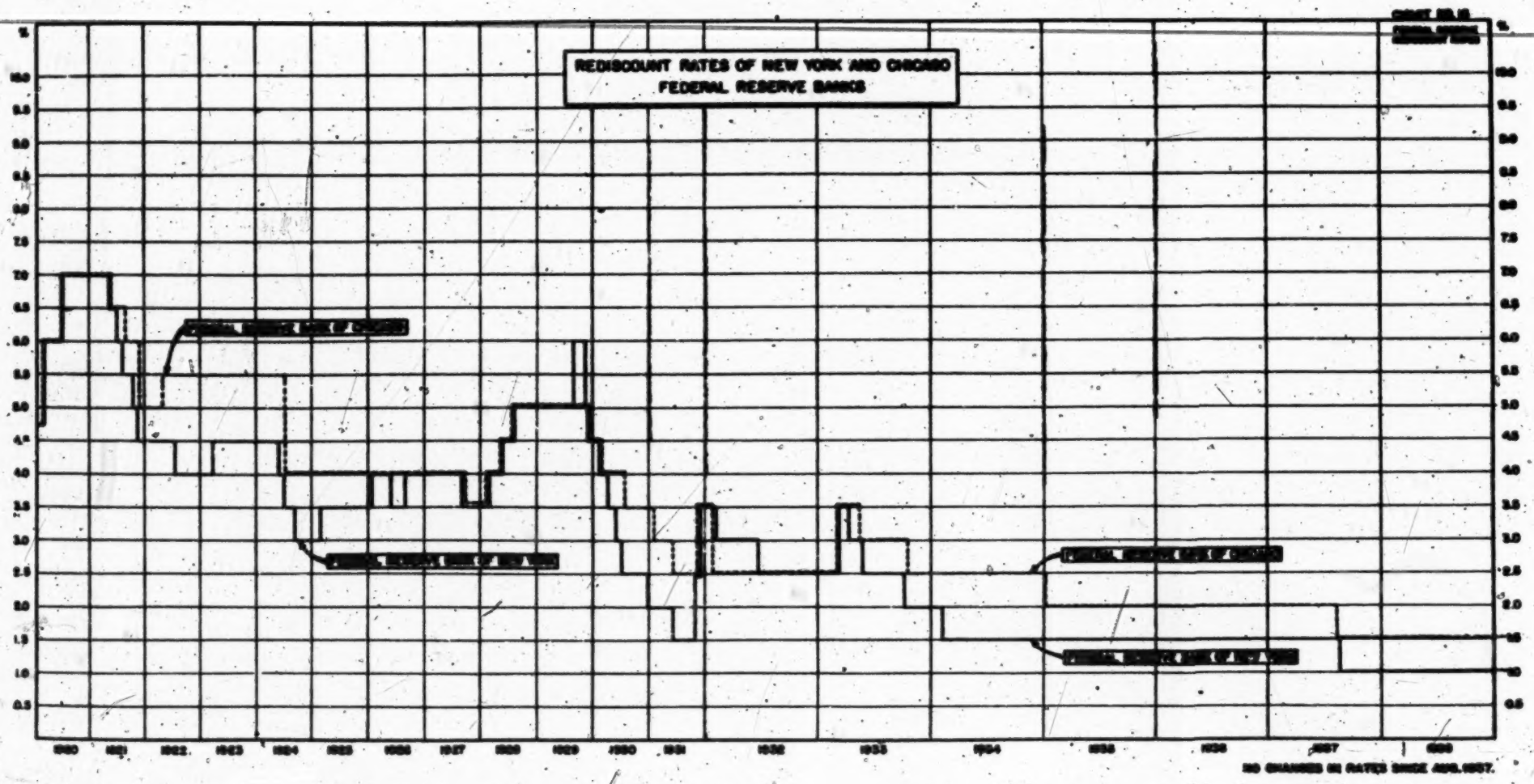
Net Profit - Represents the amount available for fixed charges after depreciation, etc.

Source of above:

Standard Trade and Securities (Published by Standard Statistics Co., Inc.) Volume 3, Section J, dated August 25, 1939.

3705

2692


REDISCOUNT RATES OF NEW YORK AND CHICAGO
FEDERAL RESERVE BANKS
NO CHANGES IN RATES SINCE AUG. 1937.

DERAL RESERVE BANK OF NEW YORK

FFECTIVE DATE OF RATES	RATES
ril 6, 1918	4 3/4
n 23, 1920	6
ne 1, "	7
y 5, 1921	6½
ne 16, "	6
ly 21, "	5½
pt 22, "	5
v 3, "	4½
ne 22, 1922	4
b 23, 1923	4½
y 1, 1924	4
ne 12, "	3½
g 8, "	3
b 27, 1925	3½
n 4, 1926	4
ril 23, "	3½
g 13, "	4
g 5, 1927	3½
b 3, 1928	4
y 18, "	4½
ly 13, "	5
g 9, 1929	6
v 1, "	5
v 15, "	4½
b 7, 1930	4
r 14, "	3½
y 2, "	3
ne 20, "	2½
c 24, "	2
y 8, 1931	1½
r 9, "	2½
t 16, "	3½
b 26, 1932	3
ne 24, "	2½
r 3, 1933	3½
r 7, "	3

FEDERAL RESERVE BANK OF NEW YORK

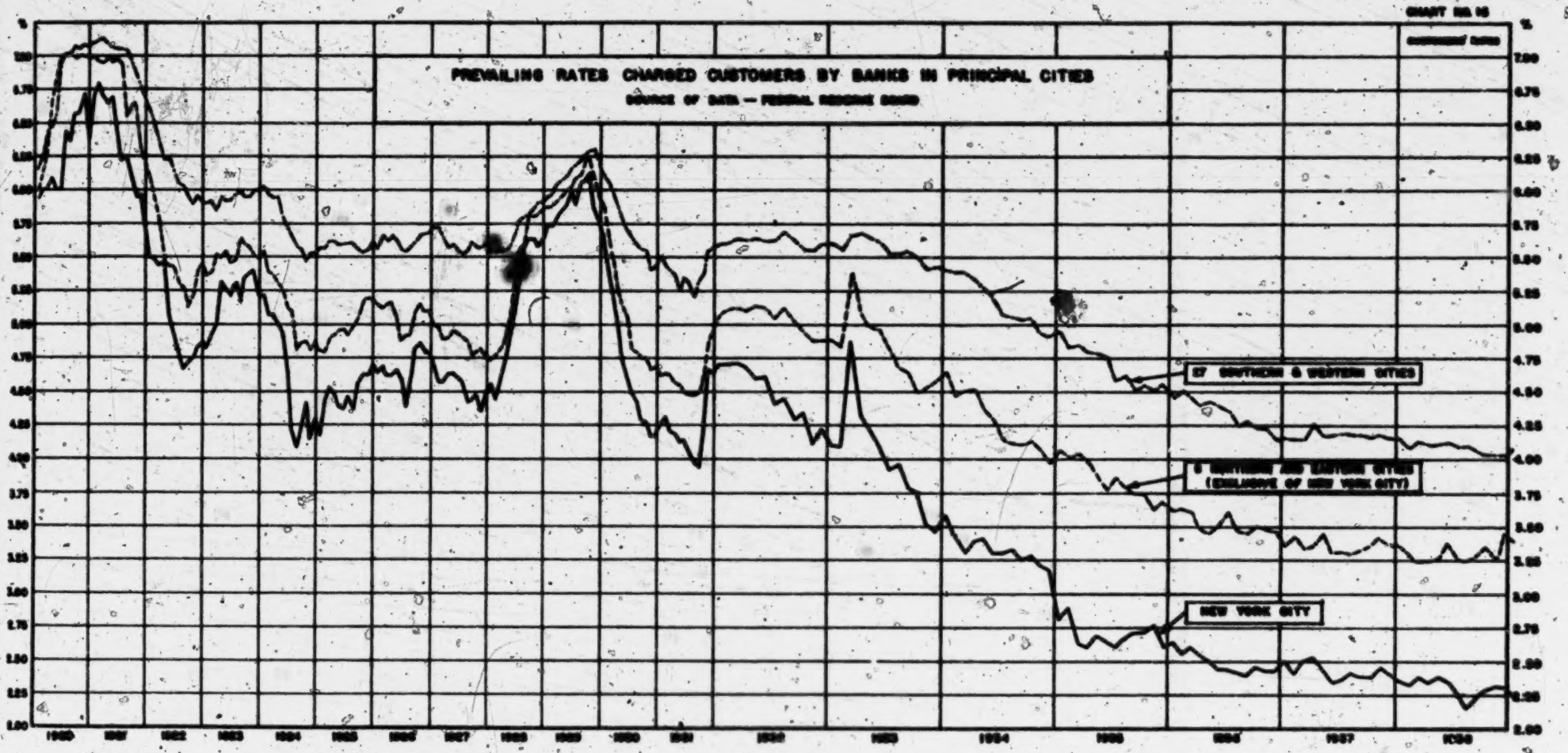
EFFECTIVE DATE OF RATES	RATES
May 26, 1933	2½
Oct 20, "	2
Feb 2, 1934	1½
Aug 27, 1937	1

FEDERAL RESERVE BANK OF CHICAGO:

EFFECTIVE DATE OF RATES	RATES
July 15, 1918	4 3/4
Jan 24, 1920	6
June 1, "	7
May 7, 1921	6½
July 30, "	6
Nov 3, "	5
Mar 25, 1922	5½
June 14, 1924	4
Sept 7, 1927	3½
Jan 25, 1928	4
Apr 20, "	4½
July 11, "	5
Nov 23, 1929	4½
Feb 8, 1930	4
June 21, "	3½
Jan 10, 1931	3
May 9, "	2½
Oct 17, "	3½
Jan 25, 1932	2½
Mar 4, 1933	3½
May 27, "	3
Oct 21, "	2½
Jan 19, 1935	2
Aug 21, 1937	1½

te: The rates are on 61 to 90 day commercial, agriculture and livestock paper the end of 1921 and on "all classes" of paper from the beginning of 1922 to re

urce of data: Standard Trade and Securities (Published by Standard Statistics pany, Inc.) Volume 3, page A-24, dated January 21 1938


PREVAILING RATES CHARGED CUSTOMERS BY BANKS IN PRINCIPAL CITIES
SOURCE OF DATA — FEDERAL RESERVE BOARD
19 SOUTHERN & WESTERN CITIES
NEW YORK CITY

NEW YORK CITY

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1928	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1929	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1930	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1931	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1932	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1933	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1934	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1935	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1936	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1937	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1938	2.89	2.89	2.(1)	2.36	2.40	2.36	2.37	2.16	2.85	2.89	2.33	2.33	2.38

(1) Series discontinued. New revised series on somewhat different basis to be substituted.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	5.99	6.15	6.32	6.66	6.79	6.95	7.01	7.01	6.94	7.05	7.08	6.97	6.77
1921	6.99	6.95	6.77	6.73	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.77
1922	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1923	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1924	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1925	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1926	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1927	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1928	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1929	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1930	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1931	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1932	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1933	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1934	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1935	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1936	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1937	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1938	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71
1939	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71	6.71

(1) Series discontinued. New revised series on somewhat different basis to be substituted.

WEIGHTED AVERAGES UNIT: PER CENT

27 SOUTHERN AND WESTERN CITIES

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	6.18	6.26	6.43	6.47	6.56	6.88	7.80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1921	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1922	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1923	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1924	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1925	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1926	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1927	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1928	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1929	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1930	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1931	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1932	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1933	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1934	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1935	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1936	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1937	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1938	4.16	4.09	4.15	4.13	4.13	4.14	4.12	4.12	4.07	4.06	4.05	4.03	4.11
1939	4.10	4.09	(1)										

(1) Series discontinued. New revised series on somewhat different basis to be substituted.

See Page 4 of this Schedule, for Note and Source of Data.

PREVAILING RATES CHARGED CUSTOMERS BY BANKS IN PRINCIPAL CITIES

Note: Figures relate to rates charged by reporting banks to their own customers as distinguished from open-market rates. All averages are based on rates reported for three types of customer loans- commercial loans, and demand and time loans on securities. The method of computing the average takes into account (a) the relative importance of each of these three types of loans and (b) the relative importance of each reporting bank, as measured by total loans. In the two group averages (8 Other Northern and Eastern Cities, and 27 Southern and Western Cities) the average rate for each city included is weighted according to the importance of that city in the group, as measured by loans of all banks.

Source of data: The average rates of interest were computed by the Federal Reserve Board, and are contained in the Annual Reports of the Board of Governors of the Federal Reserve System and in the monthly issues of the Federal Reserve Bulletin. The interest rates are reproduced in Standard Trade and Securities, Volume 3, page A-29, dated January 21, 1938, and in Current Statistics Section. The above figures were taken from the last named source.

8 Other Northern and Eastern Cities

1. Chicago
2. Boston
3. Philadelphia
4. Cleveland
5. Detroit
6. Pittsburgh
7. Buffalo
8. Cincinnati

27 Southern and Western Cities

1. San Francisco
2. Los Angeles
3. St. Louis
4. Baltimore
5. Minneapolis
6. New Orleans
7. Kansas City
8. Dallas
9. Houston
10. Seattle
11. Atlanta
12. Louisville
13. Richmond
14. Denver
15. Portland, Ore.
16. Omaha
17. Jacksonville
18. Birmingham
19. Salt Lake City
20. Nashville
21. Oklahoma City
22. Spokane
23. Little Rock
24. El Paso
25. Helena
26. Charlotte
27. San Antonio

8719

2699

SCHEDULE No. 21

Department Store Sales
United States and Chicago Federal Reserve District
Monthly Average 1923-1925=100

Year	United States	Chicago Federal Reserve District
1923	98	99
1924	99	98
1925	103	103
1926	106	108
1927	107	110
1928	108	116
1929	111	118
1930	102	103
1931	92	87
1932	69	65
1933	67	64
1934	75	74
1935	79	80
1936	88	91
1937	92	98
1938	85	87

Source of Data:

Statistics compiled by the Board of Governors of the Federal Reserve System for the United States for all years and for the Chicago Federal Reserve District through 1930. The latter index was subsequently carried forward by the Survey of Current Business until the Chicago Federal Reserve Bank started the computation for its own district. Both indexes are reproduced in the Survey of Current Business from which the above figures were taken.

2700 SCHEDULE No. 22

Factory Employment and Pay Rolls Indexes
United States, State of Illinois and Chicago Industrial Area
Monthly Average 1929-1931=100

Year	United States (1)	State of Illinois (2)	Chicago Industrial Area (2)
	Factory Employment		
1929	114.9	117.5	116.4
1930	100.2	101.3	101.5
1931	84.7	81.3	82.1
1932	71.9	64.7	64.6
1933	79.6	68.3	66.0
1934	92.9	80.9	77.5
1935	99.0	85.1	79.2
1936	107.4	94.4	86.8
1937	117.8	107.1	99.4
1938	97.3	85.9	81.0
12 Mos. Ended			
8/31/39	101.4	88.0	82.0
9/30/39	112.1	88.8	82.7
	Factory Pay Rolls		
1929	123.8	130.5	130.1
1930	100.2	100.0	100.1
1931	76.0	69.3	69.6
1932	52.4	44.2	43.8
1933	56.2	45.9	42.6
1934	72.3	60.7	56.1
1935	83.1	69.6	61.5
1936	96.2	83.6	72.5
1937	114.9	105.2	92.3
1938	87.3	78.7	70.3
12 Mos. Ended			
8/31/39	95.9	84.0	73.8
9/30/39	92.	85.2	74.6

Source of Data:

Above indexes computed from date reproduced in the Survey of Current Business, a U. S. Department of Commerce publication, as follows:

(1) Based on index computed by the U. S. Department of Labor, Bureau of Labor Statistics, but adjusted to reflect comparison with the monthly average for the three years 1929–1931, instead of the average for the base period 1923–1925 as published.

(2) Based on index computed by the Illinois Department of Labor, but adjusted to reflect comparison with the monthly average for the three years 1929–1931, instead of the average for the base period 1925–1927 as published.

2701 SCHEDULE No. 23

Factory Average Weekly Earnings Indexes
United States and State of Illinois
Monthly Average 1929-1931=100

Year	United States (1)		State of Illinois (2)	
	Dollars	Index	Dollars	Index
1929	$ 28.55	111.2	$ 28.67	108.2
1930	25.84	100.7	27.17	102.6
1931	22.62	88.1	23.60	89.1
1932	17.05	66.4	18.66	70.4
1933	17.71	69.0	18.21	68.7
1934	20.12	78.4	20.42	77.1
1935	22.28	86.8	22.15	83.6
1936	24.64	96.0	24.05	90.8
1937	27.09	105.5	26.86	101.4
1938	24.49	95.4	25.07	94.6
12 Mos. Ended 7/31/39	26.12	101.7	25.98	98.1

Source of Data:

Above indexes computed from data reproduced in Survey of Current Business, a U. S. Department of Commerce publication, as follows:

(1) Index computed from data compiled by the National Industrial Conference Board covering 2000 manufacturing plants representing 25 industries, which in 1937 employed about 1,900,000 wage earners. Similar data, compiled by the U. S. Department of Labor, Bureau of Labor Statistics and covering 89 industries, were not used inasmuch as the data are not available prior to 1932. The base period for this index is the average for the three years 1929-1931.

(2) Based on index computed by the Illinois Department of Labor, but adjusted to reflect comparison with the monthly average for the three years 1929-1931, instead of the average for the base period 1925-1927, as published, which is $28.36 taken as 100.

2702 SCHEDULE No. 24

Gas, Electric and Telephone Utility Companies Serving the City of Chicago
Total Operating Revenues, Years 1929-1938

Year	The Peoples Gas, Light and Coke Company		Commonwealth Edison Company		Illinois Bell Telephone Company	
	Revenues	% of 1929-31 Average	Revenues	% of 1929-31 Average	Revenues	% of 1929-31 Average
	Gas		Electric		Telephone	
1929	$37,012,136	104.1	$83,486,745	101.0	$90,899,378	100.3
1930	35,969,186	101.1	84,004,439	101.7	92,279,788	101.8
1931	33,738,058	94.8	80,417,050	97.3	88,689,990	97.9
1932	33,427,337	94.0	74,364,244	90.0	77,688,148	85.7
1933	30,735,202	86.4	72,552,161	87.8	72,204,381	79.7
1934	33,241,230	93.4	75,929,639	91.9	73,300,070	80.9
1935	34,891,342	98.1	79,635,224	96.4	75,048,617	82.8
1936	37,072,933	104.2	83,655,722	101.2	81,371,162	89.8
1937	37,123,542	104.4	88,451,292	107.0	87,489,839	96.5
1938	37,976,207	106.8	92,926,649	112.4	87,187,670	96.2

Source of Data:
Moody's Public Utilities Manual, 1935-1939 editions.

2704 **EXHIBIT 186.**

FEDERAL POWER COMMISSION.

Rate of Return Study.

Part II.

October, 1939.

2705 Rate of Return Study.

Table of Contents.

	Chart	Schedule
Operating and Financial Statistics of the Natural Gas Industry		
Natural Gas Industry in the United States—National Revenues from Sales to Consumers, Gas Sales to Consumers, and Number of Gas Customers, Years 1929 to 1938, Inclusive	—	1
Natural Gas Industry in the United States—Comparative Estimated Income Statement for the Years 1931-1937	—	2
Monthly Sales and Revenues of the Gas Industry (Comparison of Sales and Revenues for Years 1929, 1937 and 1938)	1	—
Monthly Revenues of the Natural Gas Industry (Comparison of Revenues for Years 1938 and 1939)	2	—
Stability of the Natural Gas Industry Compared with General Industrial Activity	3	—
Interstate Transportation of Natural Gas, Years 1926 to 1937, Inclusive	—	3
Natural Gas Transported to State of Illinois from Other States, Years 1928 to 1937, Inclusive	—	4

		Chart Schedule
2706 Securities of Natural Gas Companies —Summary According to Classes of Holders	—	5
Bonds, Debentures and Notes of Natural Gas Companies:		
Holdings by Public	—	5A
Holdings by Institutions	—	5B
Holdings by Affiliates	—	5C
Preferred Stocks of Natural Gas Companies:		
Holdings by Public	—	5D
Holdings by Affiliates	—	5E
Common Stocks of Natural Gas Companies:		
Holdings by Public	—	5F
Holdings by Affiliates	—	5G
Bonds of Natural Gas Companies Sold in Period from January 1, 1935 to September 30, 1939—Cost of Money to Issuing Companies and Yield to Public	—	6
Preferred Stocks of Natural Gas Companies Sold in Period from January 1, 1935 to September 30, 1939—Yield to Public	—	7
Companies Affiliated (Directly and Indirectly with Natural Gas Pipeline Company of America and Texoma Natural Gas Co.	4	—
Recent Financing by Companies Affiliated (Directly and Indirectly) with Natural Gas Pipeline Company of America and Texoma Natural Gas Company	—	8

2707

NATURAL GAS INDUSTRY IN THE UNITED STATES
NATIONAL REVENUES FROM SALES TO CONSUMERS, GAS SALES TO CONSUMERS (M.C.F.), AND NUMBER OF GAS CUSTOMERS

Years 1929 to 1938, Inclusive

Year	Total	Domestic(1)	Commercial	Industrial(2)	Miscellaneous	Total	Domestic(1)	Commercial	Industrial(2)	Miscellaneous
	Revenues From Sales to Consumers					Average Annual Revenue Per M.C.F. of Gas Sales (3)				
1929	$ 376,250,000	$ 223,491,000	$ 32,579,000	$ 117,857,000	$ 2,330,000	$ 0.380	$ 0.667	$ 0.333	$ 0.201	$ 0.201
1930	385,857,000	237,485,000	33,994,000	112,171,000	2,207,000	0.390	0.682	0.351	0.197	0.212
1931	366,846,000	237,739,000	37,899,000	89,276,000	1,332,000	0.405	0.698	0.351	0.182	0.198
1932	342,651,000	228,063,000	38,995,000	74,134,000	1,459,000	0.411	0.711	0.306	0.174	0.160
1933	329,889,000	213,496,000	37,169,000	77,744,000	1,480,000	0.383	0.711	0.304	0.162	0.170
1934	347,067,000	213,619,000	38,376,000	93,123,000	1,949,000	0.356	0.704	0.485	0.160	0.173
1935	376,385,000	225,485,000	42,314,000	106,383,000	2,093,000	0.357	0.705	0.480	0.169	0.158
1936	412,444,000	237,210,000	46,463,000	126,636,000	2,135,000	0.339	0.698	0.480	0.166	0.148
1937	443,219,000	246,069,000	48,613,000	143,894,000	2,643,000	0.337	0.689	0.471	0.172	0.161
1938	419,474,000	244,339,000	47,574,000	125,108,000	2,453,000	0.349	0.700	0.476	0.170	0.162
	Gas Sales To Consumers (M.C.F.)					Average Annual Gas Sales (M.C.F.) Per Customer (3)				
1929	991,036,000	335,418,000	98,641,000	585,271,000	11,706,000	173.7	62.5	184.8	30,692.5	7,804.0
1930	990,066,000	347,979,000	91,702,000	549,992,000	10,393,000	161.7	60.5	177.6	29,081.2	4,728.1
1931	908,270,000	340,991,000	68,783,000	489,217,000	9,279,000	146.1	59.0	169.3	21,646.8	4,399.5
1932	834,010,000	320,641,000	77,100,000	427,151,000	9,118,000	135.5	56.1	185.3	17,393.9	4,339.0
1933	862,388,000	300,286,000	73,781,000	479,629,000	8,692,000	143.1	53.7	182.5	19,696.9	4,822.9
1934	976,141,000	303,321,000	79,153,000	582,387,000	11,280,000	156.8	52.4	190.4	22,838.7	5,936.8
1935	1,053,896,000	320,733,000	88,115,000	632,073,000	12,885,000	164.0	53.8	202.6	22,493.7	6,781.6
1936	1,215,930,000	339,893,000	96,759,000	764,820,000	14,458,000	183.8	55.4	215.9	24,552.3	7,229.0
1937	1,318,140,000	360,284,000	103,306,000	836,166,000	16,384,000	191.9	56.7	222.0	23,482.0	7,123.5
1938	1,200,607,000	349,285,000	99,845,000	736,313,000	15,164,000	170.7	53.6	207.6	19,846.7	6,993.0
	Average Number of Customers During Year					Average Annual Revenue Per Customer (3)				
1929	5,703,000	5,365,000	317,400	19,100	1,500	$ 65.97	$ 41.65	$ 102.64	$ 6,170.52	$ 1,566.67
1930	6,122,100	5,752,900	347,400	19,600	2,200	63.03	41.28	97.85	5,723.01	1,003.18
1931	6,215,500	5,774,500	416,200	22,600	2,200	58.98	41.70	91.06	3,950.26	605.45
1932	6,155,600	5,712,900	416,100	24,600	2,000	55.66	39.92	93.72	3,013.58	789.50
1933	6,027,600	5,597,100	404,300	24,400	1,800	54.56	38.14	91.92	3,186.39	822.22
1934	6,226,900	5,783,400	415,700	25,300	1,900	55.74	36.94	92.32	3,691.88	1,025.79
1935	6,424,900	5,999,900	435,000	28,100	1,900	58.58	37.82	97.27	3,793.34	1,071.58
1936	6,616,900	6,135,700	448,100	31,100	2,000	62.33	38.66	103.69	4,071.90	1,067.50
1937	6,859,300	6,356,000	465,300	35,700	2,300	64.62	39.03	104.48	4,030.64	1,149.13
1938	7,033,700	6,513,400	480,900	37,100	2,300	59.64	37.52	94.93	3,372.18	1,066.52

Sources of Data: "Monthly Summary of Gas Company Statistics, Annual Supplement", issued by the American Gas Association in March, 1939.
(1) Includes natural gas sold for house heating.
(2) Includes natural gas sold to electric utilities for use in generating electric energy.
(3) Computed averages.

Note: These figures do not include natural gas used in field operations and in the manufacture of carbon black, or gas used by distributing companies in the conduct of their own operations.
Companies selling mixed manufactured and natural gas are not included in these data.

SCHEDULE NO. 1

2708

NATURAL GAS INDUSTRY IN THE UNITED STATES*
COMPARATIVE ESTIMATED INCOME STATEMENT FOR THE YEARS 1931-1937

(Thousands of Dollars)

	1937	1936	1935	1934	1933	1932	1931	Percent of Operating Revenue 1937	1936	1935	1934	1933	1932	1931
Revenue From Gas Sales to Consumers	$441,232	$410,607	$374,346	$345,348	$328,185	$340,711	$364,186	98.7	99.0	99.0	99.2	99.2	99.4	98.9
Miscellaneous Operating Revenue	5,610	4,251	3,708	2,832	2,691	2,088	4,042	1.3	1.0	1.0	0.8	0.8	0.6	1.1
Total Operating Revenue	$446,842	$414,858	$378,054	$348,180	$330,876	$342,799	$368,228	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Operating Expense **	$222,527	$202,866	$193,666	$189,062	$180,956	$178,575	$197,002	49.8	48.9	51.2	54.3	54.7	52.1	53.5
Maintenance	16,533	17,498	15,130	13,231	12,902	13,710	15,466	3.7	4.2	4.0	3.8	3.9	4.0	4.2
Uncollectible Bills	1,787	1,845	1,135	1,740	3,308	2,742	1,841	0.4	0.3	0.3	0.5	1.0	0.8	0.5
Taxes Accrued	41,109	37,337	31,774	30,988	29,111	30,505	29,826	9.2	9.0	8.4	8.9	8.8	8.9	8.1
Retirement, Depletion, Depreciation Exp.	53,602	56,878	53,899	42,130	39,698	41,131	40,505	12.0	13.7	14.3	12.1	12.0	12.0	11.0
Total Revenue Deductions	$335,578	$305,750	$295,604	$277,151	$265,975	$266,663	$284,640	75.1	73.7	78.2	79.6	80.4	77.8	77.3
Net Operating Income	$111,264	$109,108	$ 93,050	$ 71,029	$ 64,840	$ 76,092	$ 83,588	24.9	26.3	24.6	20.4	19.6	22.2	22.7
Non-Operating Income	5,362	4,978	5,674	5,571	5,293	5,827	7,733	1.2	1.2	1.5	1.6	1.6	1.7	2.1
Gross Corporate Income	$116,626	$114,086	$ 98,724	$ 76,600	$ 70,133	$ 81,919	$ 91,321	26.1	27.5	26.1	22.0	21.2	23.9	24.8
Interest and Amortization Charges, Etc.	42,003	45,220	42,783	45,263	43,337	38,046	40,505	9.4	10.9	11.3	13.0	13.1	11.1	11.0
Net Income Available for Dividends and Surplus	$74,623	$68,866	$55,941	$31,337	$26,796	$43,873	$50,816	16.7	16.6	14.8	9.0	8.1	12.8	13.8

	1937	1936	1935	1934
Fixed Capital (000 omitted)	$2,400,944	$2,355,950	$2,331,894	$2,317,444

* Companies formerly distributing manufactured gas but which were distributing natural gas at the beginning of 1937 have been included in the above tabulation for all seven years. The data shown above for 1931 to 1937 are therefore not comparable with data on the natural gas industry previously issued for these years.

** Includes leased property rents.

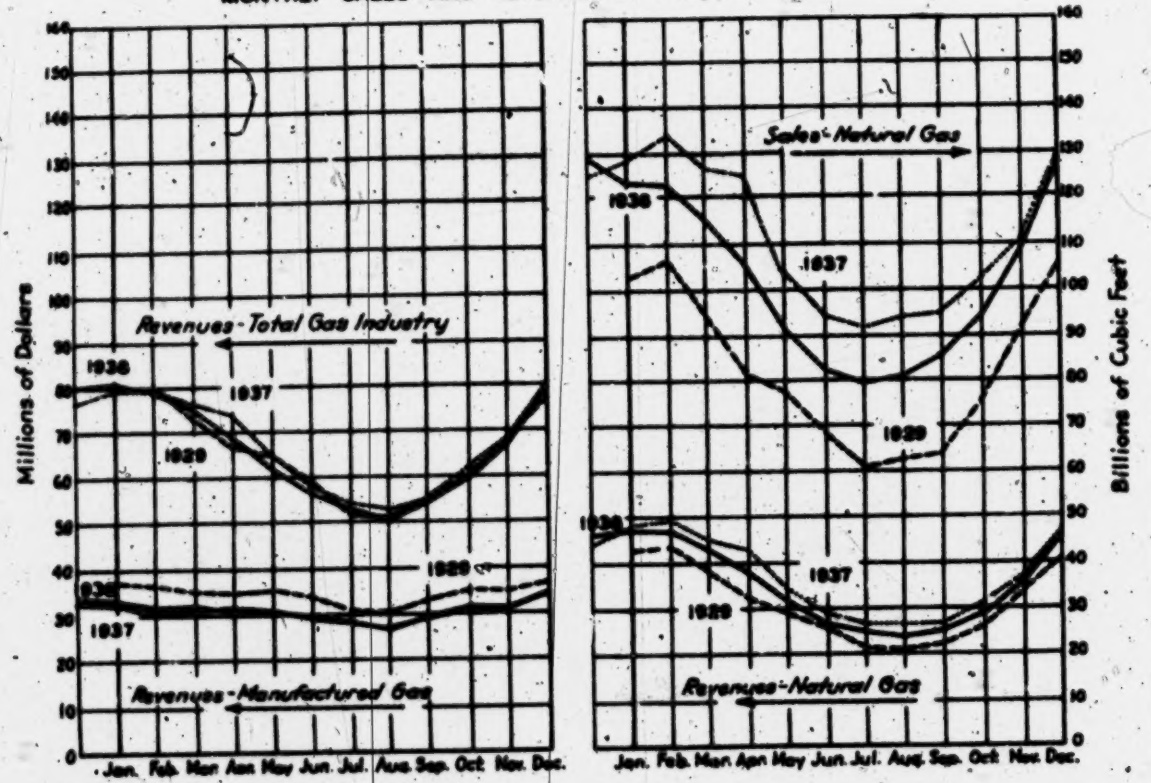
Source of Data: "Annual Statistics of the Natural Gas Industry in 1937, Statistical Bulletin No. 33", issued by the American Gas Association in October, 1938.

Note: Companies selling mixed manufactured and natural gas are not included in these data.

CHART NO. 1

SALES AND REVENUES OF GAS INDUSTRY

MONTHLY SALES AND REVENUES OF THE GAS INDUSTRY



Source:

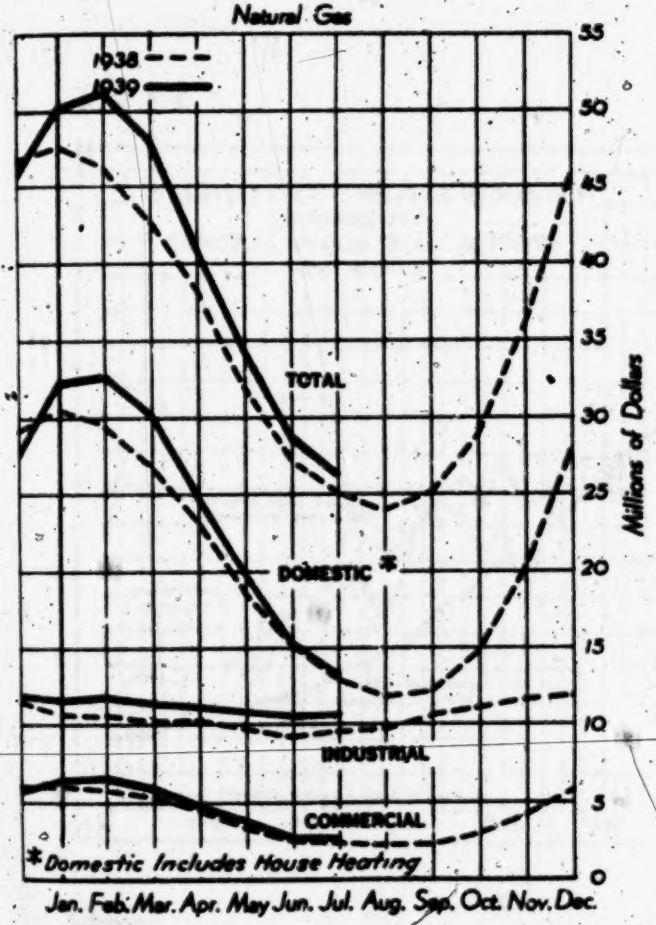
"Monthly Summary of Gas Company Statistics", for month of December 1938, page No.1, issued by the American Gas Association.

2710

CHART NO.2

NATURAL GAS REVENUES 1938-1939

MONTHLY REVENUES



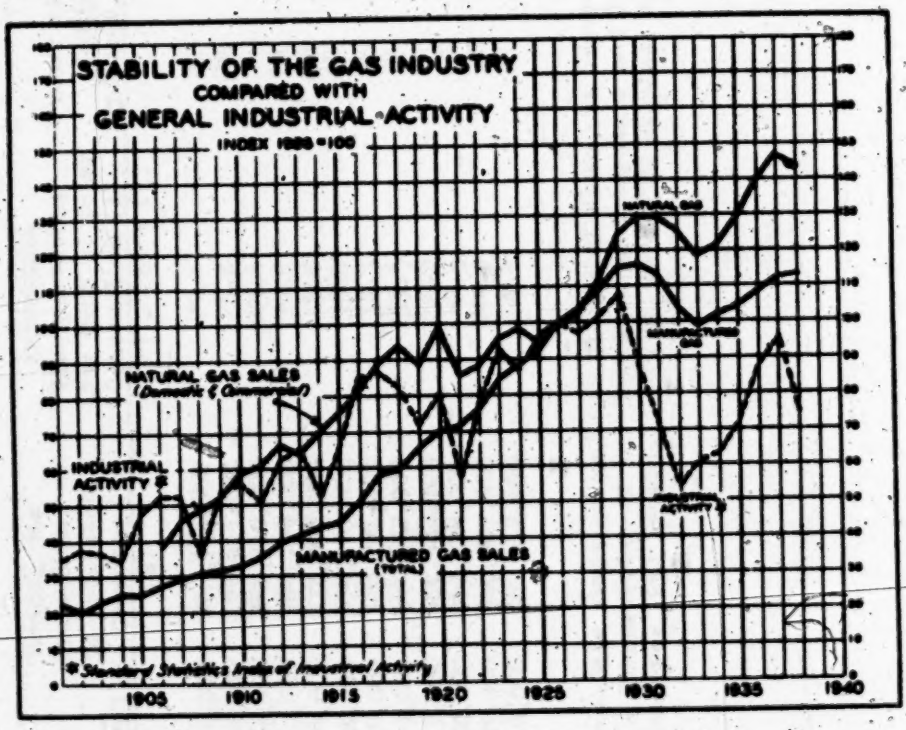
Source:
"Monthly Summary of Gas Company Statistics" for month of July, 1939, page No.1, issued by the American Gas Association.

3735

CHART NO. 3

STABILITY OF
GAS INDUSTRY

2711



Source:

"Annual Statistics of The Natural Gas Industry in 1937,Statistical Bulletin No.33,October 1938",page No.4,issued by the American Gas Association.

(All Gas Quantities in Thousand Cubic Feet)

Year	Total Natural Gas Production	Total Natural Gas Consumption(1)	Natural Gas Transported in Interstate Commerce (2)	Interstate Transportation, Per Cent of Total Consumption (1)	Number of States in which Natural Gas Was	
					Produced (3)	Consumed
(a)	(b)	(c)	(d)	(e) = (d) ÷ (c)		
1926	1,313,019,000	704,344,000	209,361,000	29.7	22	23
1927	1,445,428,000	751,702,000	194,217,000	25.8	24	25
1928	1,568,139,000	819,144,000	241,210,000	29.4	24	25
1929	1,917,693,000	951,261,000	324,779,000	34.1	26	27
1930	1,943,421,000	951,854,000	378,803,000	39.8	26	30
1931	1,686,436,000	917,488,000	330,307,000	36.0	24	35
1932	1,555,990,000	856,720,000	329,781,000	38.5	24	35
1933	1,555,474,000	872,159,000	344,652,000	39.5	24	35
1934	1,770,721,000	980,513,000	408,382,000	41.6	24	35
1935	1,916,595,000	1,087,398,000	462,224,000	42.5	24	35
1936	2,167,802,000	1,258,629,000	566,907,400	45.0	24	35
1937	2,447,620,000	1,410,636,000	682,612,000	48.4	24	35

Source of data:

Years 1926 to 1934, inclusive--Data compiled by U. S. Bureau of Mines, as represented at page 160 of record of hearing before a Subcommittee of the Committee on Interstate and Foreign Commerce, House of Representatives, 74th Congress, 2nd Session, on H. R. 11662 "To Regulate the Transportation and Sale of Natural Gas in Interstate Commerce and for Other Purposes", April 1936.

Years 1935-1936 - U. S. Bureau of Mines, "Minerals Year Book", 1937 and 1938 editions.

Year 1937 - U. S. Bureau of Mines, "Mineral Market Reports, No. M.M.S. 682", issued December 13,1938.

(1) Excluding gas used for field operations and manufacture of carbon black. Natural gas used for latter purpose is used in the State in which it is produced.

(2) Excluding amounts transported to Canada and Mexico.

(3) Five states produce over 80 percent of total natural gas production. These states, ranked according to volume of gas produced in 1937, are Texas, Oklahoma, California, Louisiana and West Virginia.

3737

SCHEDULE

2713

SCHEDULE No. 4

Natural Gas Transported to State of Illinois
From Other States
Years 1928 to 1937, Inclusive

Year	Total	State from which Transported			
		Texas	Louisiana	Kansas	Other
		Thousand Cubic Feet			
1928	—	—	—	—	—
1929	156,000	—	156,000	—	—
1930	6,712,000	—	6,712,000	—	—
1931	11,894,000	4,166,000	7,553,000	—	175,000
1932	27,675,000	18,348,000	8,330,000	719,000	278,000
1933	31,713,000	19,766,000	10,704,000	974,000	269,000
1934	43,220,000	29,952,000	10,971,000	2,019,000	278,000
1935	55,874,000	39,886,000	13,574,000	2,107,000	307,000
1936	71,654,000	51,800,000	17,214,000	2,385,000	255,000
1937	77,610,000	56,957,000	17,367,000	2,973,000	313,000

Source of Data:
U. S. Bureau of Mines Publications—
Years 1926 to 1931, inclusive—"Mineral Resources of the United States".
Years 1932 to 1936, inclusive—"Minerals Year Book".
Year 1937—"Mineral Market Reports, No. M. M. S. 682", issued December 31, 1938.

Securities of Natural Gas Companies
Summary According to Classes of Holders

Company and Issues	Total Securities Outstanding	Held by Public	Held by Institutions	Held by Affiliates
Arkansas-Louisiana Gas Co.				
Bonds and Debentures:				
1st Mtg. 2¼%, 1940-44	$ 3,300,000	$ —	$ 3,300,000	$ —
1st Mtg. 3¼%, 1945-54	9,700,000	—	9,700,000	—
Debentures, 4¼%, 1955	6,500,000	—	—	6,500,000
	$ 19,500,000	$ —	$ 13,000,000	$ 6,500,000
Common Stock, 298,988 shs. Par $50	14,949,400	—	—	14,949,400
Total	$ 34,449,400	$ —	$ 13,000,000	$ 21,449,400
Canadian River Gas Co.				
1st Mtg. 6%	$ 6,244,000	$ —	$ —	$ 6,244,000
Common Stock	1	—	—	
Total	$ 6,244,001	$ —	$ —	$ 6,244,000
Chicago District Pipeline Co.				
Notes Payable	$ 2,769,897	$ —	$ —	$ 2,769,897
Common Stock, 1,000 shs. No Par	10,000	—	—	10,000
Total	$ 2,779,897	$ —	$ —	$ 2,779,897
Cities Service Gas Co.				
Bonds and Debentures:				
1st Mtg. 3¼-3¾%, 1940-54	$ 35,000,000	$ —	$ 35,000,000	$ —
Debentures, 5¼%, 1956	8,000,000	—	—	8,000,000
	$ 43,000,000	$ —	$ 35,000,000	$ 8,000,000
Common Stock, 300,000 shs. No Par	30,000,000	—	—	30,000,000
Total	$ 73,000,000	$ —	$ 35,000,000	$ 38,000,000
Colorado Interstate Gas Co.				
1st & Coll. Trust 3¼%, 1948	$ 10,898,000	$ —	$ 4,865,000	$ 6,033,000
Preferred Stock, 6%, Par $100	2,000,000	—	—	2,000,000
Common Stock, 1,250,000 shs. No Par	2,352,941	—	—	2,352,941
Total	$ 15,250,941	$ —	$ 4,865,000	$ 10,385,941
East Ohio Gas Co.				
Preferred Stock, 7%, Par $100	$ 10,000,000	$ —	$ —	$ 10,000,000
Common Stock, Par $100	28,500,000	—	—	28,500,000
Total	$ 38,500,000	$ —	$ —	$ 38,500,000
El Paso Natural Gas Co.				
Bonds and Notes:				
1st Mtg. 3¼%, 1953	$ 6,000,000	$ —	$ 6,000,000	$ —
Serial Bank Notes	3,480,000	—	3,480,000	—
	$ 9,480,000	$ —	$ 9,480,000	$ —
Preferred Stock, 7% Cum., Par $100	1,479,700	1,479,700	—	—
Common Stock	1,802,559	1,802,559	—	—
Total	$ 12,762,259	$ 3,282,259	$ 9,480,000	$ —

El Paso Natural Gas Co. also has recorded $3,486,435 Premium on Common Stock.

Schedule No. 5
Page 2

Schedule of Natural Gas Companies
Summary According to Classes of Holders

Company and Issues	Total Securities Outstanding	Held by Public	Institutions	Affiliates
uitable Gas Co.				
Notes Payable	$ 13,540,408	$ —	$ —	$ 13,540,408
Common Stock, Par $100	3,300,000	—	—	3,300,000
Total	$ 16,840,408	$ —	$ —	$ 16,840,408
pe Natural Gas Co.				
Common Stock, Par $100	$ 27,969,300	$ —	$ —	$ 27,969,300
uston Gulf Gas Co.				
Bonds, Debentures and Notes:				
1st & Coll. 6%, 1943	$ 4,238,000	$ 3,813,000	$ 425,000	$ —
Debentures 6½%, 1943	1,850,000	1,443,000	407,000	—
Notes 7%, 1945	1,900,000	—	—	1,900,000
	$ 7,988,000	$ 5,256,000	$ 832,000	$ 1,900,000
Preferred Stocks:				
7%, Series A, Par $100	$ 806,300	$ 11,100	$ —	$ 795,200
7%, Series B, Par $100	1,500,000	1,000	—	1,499,000
	$ 2,306,300	$ 12,100	$ —	$ 2,294,200
Common Stock, 517,008 shs. No Par	$ 5,170,080	$ 21,160	$ —	$ 5,148,920
Total	$ 15,464,380	$ 5,289,260	$ 832,000	$ 9,343,120
ian Territory Illuminating Oil Co.				
Notes Payable:				
Affiliates	$ 21,947,028	$ —	$ —	$ 21,947,028
Bank	6,000,000	—	6,000,000	—
	$ 27,947,028	$ —	$ 6,000,000	$ 21,947,028
Common Stock:				
Class A, Par $1	$ 1,304,600	$ 98,476	$ —	$ 1,206,124
Class B, Par $1 (Voting)	7,090,037	1,924,327	—	5,165,710
	$ 8,394,637	$ 2,022,803	$ —	$ 6,371,834
Total	$ 36,341,665	$ 2,022,803	$ 6,000,000	$ 28,318,862
ntate Natural Gas Co.				
mmon Stock, 952,953 shs. No Par	$ 6,529,530	$ 1,893,564	$ —	$ 4,635,966
ois Gas Corp.				
mmon Stock, Par $100	$ 22,671,400	$ —	$ —	$ 22,671,400

Securities of Natural Gas Companies
Summary According to Classes of Holders

Company and Issues	Total Securities Outstanding	Held by Public	Held by Institutions	Held by Affiliates
Lone Star Gas Co.				
Notes:				
Mortgage Note	$ 214,100	$ 214,100	$ —	$ —
Notes, 4¼%, 1953	19,600,000	—	—	19,600,000
	$ 19,814,100	$ 214,100	$ —	$ 19,600,000
Common Stock, 514,000 shs. No Par	28,113,220	—	—	28,113,220
Total	$ 47,927,320	$ 214,100	$ —	$ 47,713,220
Manufacturers Light and Heat Co., The				
Notes Payable	$ 360,000	$ —	$ —	$ 360,000
Common Stock, Par $50	22,530,400	6,300	—	22,524,100
Total	$ 22,890,400	$ 6,300	$ —	$ 22,884,100
Memphis Natural Gas Co.				
Notes	$ 1,700,000	$ —	$ 1,700,000	$ —
Common Stock, Par $5	4,593,400	2,381,615	—	2,211,785
Total	$ 6,293,400	$ 2,381,615	$ 1,700,000	$ 2,211,785
Mississippi River Fuel Corp.				
Bonds and Notes:				
1st Mtg. 4%, 1952	$ 8,999,000	$ —	$ 8,999,000	$ —
Notes, 6%, 1940	3,010,000	—	—	3,010,000
	$ 12,009,000	$ —	$ 8,999,000	$ 3,010,000
Common Stock, Par $10	6,552,200	—	—	6,552,200
Total	$ 18,561,200	$ —	$ 8,999,000	$ 9,562,200
Mountain Fuel Supply Co:				
Common Stock, Par $10	$ 19,899,025	$ 15,090,455	$ —	$ 4,808,570
Natural Gas Pipeline Co. of America				
1st Mtg. 6%, 1946	$ 44,400,000	$ —	$ —	$ 44,400,000
Common Stock, 1,500,000 shs. No Par	3,000,000	—	—	3,000,000
Total	$ 47,400,000	$ —	$ —	$ 47,400,000
Northern Natural Gas Co.				
1st Mtg. 3¼%, 1954	$ 16,000,000	$ —	$ 16,000,000	$ —
Common Stock, 203,000 shs. No Par	19,273,460	—	—	19,273,460
Total	$ 35,273,460	$ —	$ 16,000,000	$ 19,273,460

717

Schedule No. 5
Page 4

Securities of Natural Gas Companies
Summary According to Classes of Holders

Company and Issues	Total Securities Outstanding	Held by Public	Institutions	Affiliates
io Fuel Gas Co.				
Notes:				
4% due 1940-46	$ 5,250,000	$ —	$ 5,250,000	$ —
Affiliates	6,734,363	—	—	6,734,363
	$ 11,984,363	$ —	$ 5,250,000	$ 6,734,363
Common Stock, Par $50	67,190,150	—	—	67,190,150
Total	$ 79,174,513	$ —	$ 5,250,000	$ 73,924,513
lahoma Natural Gas Co.				
Bonds and Notes:				
1st Mtg. B. 3¼%, 1955	$ 17,000,000	$ 17,000,000	$ —	$ —
Bank Loans	8,000,000	—	8,000,000	—
	$ 25,000,000	$ 17,000,000	$ 8,000,000	$ —
Preferred Stock:				
$5.50 Preferred, Par $100	$ 5,800,000	$ 5,800,000	$ —	$ —
$3 Preferred, Par $50	4,552,500	4,552,500	—	—
	$ 10,352,500	$ 10,352,500	$ —	$ —
Common Stock, Par $15	$ 8,249,790	$ 8,249,790	$ —	$ —
Total	$ 43,602,290	$ 35,602,290	$ 8,000,000	$ —
handle Eastern Pipe Line Co.				
Bonds and Notes:				
1st Mtg. A, 4%, 1952	$ 23,500,000	$ 4,483,244	$ 19,016,756	$ —
Bank Loans	2,000,000	—	2,000,000	—
	$ 25,500,000	$ 4,483,244	$ 21,016,756	$ —
Preferred Stock:				
$6, Series A	$ 10,000,000	$ —	$ —	$ 10,000,000
$6, Series B	1,000,000	—	—	1,000,000
	$ 11,000,000	$ —	$ —	$ 11,000,000
Common Stock, 729,652 shs. No Par	$ 18,216,300	$ —	$ —	$ 18,216,300
Total	$ 54,716,300	$ 4,483,244	$ 21,016,756	$ 29,216,300
h Penn Oil Co.				
Common Stock, Par $25	$ 25,000,000	$ 20,681,425	$ —	$ 4,318,575

Schedule No.

Securities of Natural Gas Companies
Summary According to Classes of Holders

Company and Issues	Total Securities Outstanding	Held by Public	Institutions	Affiliates
Southern California Gas Co.				
Bonds:				
1st Mtg. 4%, 1965	$ 15,000,000	$ 10,378,924	$ 4,621,076	$ —
1st Mtg. 4¼%, 1961	12,500,000	9,369,826	3,130,174	—
	$ 27,500,000	$ 19,748,750	$ 7,751,250	$ —
Preferred Stock:				
6% Stock, Par $25	$ 3,998,900	$ 2,961,800	$ —	$ 1,037,1
6% Stock, Series A, Par $25	19,575,800	19,575,800	—	—
	$ 23,574,700	$ 22,537,600	$ —	$ 1,037,1
Common Stock, Par $25	$ 28,800,000	$ —	$ —	$ 28,800,0
Total	$ 79,874,700	$ 42,286,350	$ 7,751,250	$ 29,837,1
2718				Page 5
Southern Counties Gas Co. of California				
1st Mtg. 4¼%, 1968	$ 11,500,000	$ 9,432,860	$ 2,067,140	$ —
Common Stock, Par $100	8,000,000	—	—	8,000,0
Total	$ 19,500,000	$ 9,432,860	$ 2,067,140	$ 8,000,0
Southern Natural Gas Co.				
Bonds and Notes:				
1st Mtg. 4½%, 1951	$ 12,939,000	$ 6,668,982	$ 6,270,018	$ —
1st Mtg. 4½%, 1952	616,000	—	616,000	—
Adj. Mtg. 1960	5,771,523	2,864,523	—	2,907,0
Notes 4½%	1,475,000	—	1,475,000	—
	$ 20,801,523	$ 9,533,505	$ 8,361,018	$ 2,907,0
Common Stock, Par $7.50	5,189,776	2,698,667	—	2,491,1
Total	$ 25,991,299	$ 12,232,172	$ 8,361,018	$ 5,398,1
Texoma Natural Gas Co.				
Gas & P. L. Mtg. 6%, 1946	$ 18,750,000	$ —	$ —	$ 18,750,0
Common Stock, 10,000 shs. No Par	500,000	—	—	500,0
Total	$ 19,250,000	$ —	$ —	$ 19,250,0
United Fuel Gas Co.				
Notes:				
4%, 1940-46	$ 5,250,000	$ —	$ 5,250,000	$ —
Affiliates	13,036,278	—	—	13,036,2
	$ 18,286,278	$ —	$ 5,250,000	$ 13,036,2
Common Stock, Par $1	30,000,000	—	—	30,000,0
Total	$ 48,286,278	$ —	$ 5,250,000	$ 43,036,2

Exhibit No. 186.

Securities of Natural Gas Companies
Summary According to Classes of Holders

Schedule No. 5

Company and Issues	Total Securities Outstanding	Held by Public	Held by Institutions	Held by Affiliates
ited Gas Pipe Line Co.				
Bonds and Debentures:				
Northern Texas 6%, 1940	$ 910,000	$ —	$ —	$ 910,000
Debentures, 6%, 1952	23,000,000	—	—	23,000,000
	$ 23,910,000	$ —	$ —	$ 23,910,000
Common Stock, 100,000 shs. No Par	96,772,535	—	—	96,772,535
Total	$ 120,682,535	$ —	$ —	$120,682,535
ited Natural Gas Co.				
Common Stock	$ 15,125,000	$ —	$ —	$ 15,125,000
Grand Total	$1,038,250,901	$154,898,697	$153,572,164	$729,780,040
9				
nd Total by Types of Securities:				Page 6
Bonds, Debentures and Notes	$ 418,882,597	$ 65,668,459	$153,572,164	$199,641,974
Preferred Stock	60,713,200	34,381,900	—	26,331,300
Common Stock	558,655,104	54,848,338	—	503,806,766
Grand Total	$1,038,250,901	$154,898,697	$153,572,164	$729,780,040

BONDS, DEBENTURES AND NOTES OF NATURAL GAS COMPANIES

HOLDINGS BY PUBLIC

Company	Issue	Total Outstanding	Held by Public (a)	Ratings Moody's	Ratings Poor's	Times Fixed Charges Earned 1938	% of Funded Debt to Fixed Capital Dec. 31, 1938	Market Quotations 1937 High	Market Quotations 1937 Low	Market Quotations 1938 High	Market Quotations 1938 Low
Houston Gulf Gas Co.	1st & Coll. 6's, 1943	$ 4,238,000	$ 3,813,000	Baa	B**	(1.30	43.80)	105 1/2	97	104 1/2	97 1/2
" " " "	Debentures, 6½%, 1943	1,850,000	1,443,000	Ba	B*	(	)	103 3/4	95 1/2	103 1/2	96
Lone Star Gas Co.	Mortgage Note	214,100	214,100	-	-	3.88(c)	23.54	-	-	-	-
Oklahoma Natural Gas Co.	1st Mtg.B, 3 3/4%, 1955 (b)	17,000,000	17,000,000	Baa	B**	1.91	56.87	-	-	-	-
Panhandle Eastern Pipe Line Co.	1st Mtg.A, 4½%, 1952	23,500,000	4,483,244	A	A	3.33	43.55	101 5/8	97	105 1/4	98
Southern California Gas Co.	1st Mtg. 4%, 1965	15,000,000	10,378,924	Aaa	A**	(5.29	20.83)	107 1/2	101 3/8	110 1/4	106 3/4
" " " "	1st Mtg. 4½%, 1961	12,500,000	9,369,826	Aaa	A**	(	)	108 1/2	105	108 1/4	105 1/2
Southern Counties Gas Co. of Calif.	1st Mtg. 4½%, 1968	11,500,000	9,432,860	Aa	A*	3.58	37.24	105 1/2	102 1/2	106 1/2	103 1/2
Southern Natural Gas Co.	1st Mtg. 4½%, 1951	12,939,000	6,668,982	Baa	B**	(1.82	68.86)	101 1/2	94 1/2	102	91
" " " "	Adjustment Mtg. 6%, 1960	5,771,523	2,864,523	B	B	(	)	95	73 1/2	91 1/2	72
TOTAL		$104,512,623	$65,668,459	-	-	-	-	-	-	-	-

Notes: (a) The difference between Total Outstanding and Held by Public, is held by Institutions and Affiliates.
(b) Sold in August, 1939.
(c) Based on 1937 instead of 1938.
(d) Weighted yield on issued represented.

Schedule No. 5A

BONDS, DEBENTURES AND NOTES OF NATURAL GAS COMPANIES

HOLDINGS BY PUBLIC

Total Outstanding	Held by Public (a)	Ratings Moody's	Ratings Poor's	Times Fixed Charges Earned 1938	% of Funded Debt to Fixed Capital Dec. 31, 1938	Market Quotations 1937 High	1937 Low	1938 High	1938 Low	1939 Latest	Approximate Yield to Maturity
$ 4,238,000	$ 3,813,000	Baa	B**	(1.30	43.80)	105 1/2	97	104 1/2	97 1/2	9/30 103 1/2	5.13
1,850,000	1,443,000	Ba	B*	(	)	103 3/4	95 1/2	103 1/2	96	9/30 102	5.90
214,100	214,100	-	-	3.88(c)	23.54	-	-	-	-	-	
17,000,000	17,000,000	Baa	B**	1.91	56.87	-	-	-	-	9/30 102 1/2	3.55
23,500,000	4,483,244	A	A	3.33	43.55	101 5/8	97	105 1/4	98	9/30 103 7/8	3.63
15,000,000	10,378,924	Aaa	A**	(5.29	20.83)	107 1/2	101 3/8	110 1/4	106 3/4	9/30 105 3/8	3.70
12,500,000	9,369,826	Aaa	A**	(	)	108 1/2	105	108 1/4	105 1/2	9/30 107 1/8	4.00
11,500,000	9,432,860	Aa	A*	3.58	37.24	105 1/2	102 1/2	106 1/2	103 1/2	10/3 104 5/8	4.20
12,939,000	6,668,982	Baa	B**	(1.82	68.86)	101 1/2	94 1/2	102	91	10/3 105	3.90
5,771,523	2,864,523	B	B	(	)	95	73 1/2	91 1/2	72	10/3 96	6.35
$104,512,623	$65,668,459	-	-	-	-	-	-	-	-	-	4.02 (d)

blic, is held by Institutions and Affiliates.

(c) Based on 1937 instead of 1938.
(d) Weighted yield on issues represented.

BONDS, DEBENTURES AND NOTES OF NATURAL GAS COMPANIES

HOLDINGS BY INSTITUTIONS

Company and Issue	Total Outstanding	Holding Institution	Amount	% of Total Outstanding
Arkansas-Louisiana Gas Co.				
First Mtg. 2 3/4%, A, 1940-44 (This issue and the issue directly below were sold in September 1939 to replace First Mtg., 4%, 1951, and portion of 5% Debentures held by holding company.)	$ 3,300,000(a)	(Guaranty Trust Co. of New York	$ 2,800,000	
		(Central Hanover Bank & Trust Co.	500,000	
		Total	$ 3,300,000	100.0
First Mtg., 3½%, B, 1945-54 (See note under issue directly above.)	9,700,000(a)	(Equitable Life Assurance Society of U. S.	$ 4,850,000	
		(Metropolitan Life Insurance Co.	3,550,000	
		(Massachusetts Mutual Life Ins. Co.	400,000	
		(Sun Life Assurance Co. of Canada	350,000	
		(Teachers Ins. & Annuity Association of America	300,000	
		(Provident Mutual Ins. Co. of Philadelphia	250,000	
		Total	$ 9,700,000	100.0
Cities Service Gas Co.				
First Pipeline, 3½% & 3 3/4%, 1940-54	35,000,000(b)	(In possession of four banks and two insurance companies:		
		(Purchased outright: 3 3/4% Bonds	$20,000,000	
		(Held as collateral for loans, 3½% Bonds	15,000,000	
		Total	$35,000,000	100.0
Colorado Interstate Gas Co.				
First & Coll. S. F. 3½%, 1948	10,895,000(c)	Mutual Life Insurance Co. of N. Y.	$ 4,865,000	44.6
El Paso Natural Gas Co.				
First Mtg., 3½%, 1953	6,000,000(c)	(Sun Life Assurance Co. of Canada	$ 891,102 (1)	
		(Equitable Life Assurance Society of U. S.	2,250,000	
		(Massachusetts Mutual Life Ins. Co.	275,000	
		(Metropolitan Life Ins. Co.	2,000,000	
		(Mutual Life Ins. Co. of N. Y.	475,000	
		(----------	108,898	
		Total	$ 6,000,000	100.0 (2)
Serial Bank Notes, 3%, 1939-45	3,480,000(b)	Chase National Bank	$ 3,480,000	100.0

BONDS, DEBENTURES AND NOTES OF NATURAL GAS COMPANIES

HOLDINGS BY INSTITUTIONS

Company and Issue	Total Outstanding	Holding Institution	Amount	% of Total Outstanding
Houston Gulf Gas Co.				
First & Collateral, A, 6%, 1943	$ 4,238,000(c)	(Princeton University	$ 200,000	
		(9 Other Institutions	225,000	
		Total	$ 425,000	10.0
Debentures, 6½%, 1943	1,850,000(c)	(Massachusetts Mutual Life Ins. Co.	$ 163,000	
		(7 Other Institutions	244,000	
		Total	$ 407,000	22.0
Indian Territory Illuminating Oil Co.				
Notes Payable, 3-3½%, 1940-43	6,000,000(e)	(Guaranty Trust Co. N. Y.	$ 6,000,000	100.0
Memphis Natural Gas Co.				
Notes	1,700,000(e)	Various banks	1,700,000	100.0
Mississippi River Fuel Corp.				
First P. L. 4%, 1952	8,999,000(c)	(Equitable Life Assurance Society of U.S.	$ 2,250,000	
		(Metropolitan Life Ins. Co.	3,374,000	
		(Mutual Life Insurance Co. of N. Y.	1,166,000	
		(Prudential Insurance Co. of America	2,250,000	
		(Retirements not considered above	(41,000)	
		Total	$ 8,999,000	100.0
Northern Natural Gas Co.				
First Mtg. & First Lien, A, 3¼%, 1954 (Sold in August 1939, to replace First Mtg. 4 3/4%, 1947; First Mtg. 4½%, 1947; and Debentures 4½%, 1948.)	16,000,000(d)	(Metropolitan Life Insurance Co.	$ 5,400,000	
		(Equitable Life Assurance Society of U. S.	3,600,000	
		(Prudential Insurance Co. of America	3,600,000	
		(Travelers Insurance Co.	2,400,000	
		(Sun Life Assurance Co. of Canada	1,000,000	
		Total	$16,000,000	100.0
Ohio Fuel Gas Co.				
4% Notes, 940-46	5,250,000(c)	(Metropolitan Life Insurance Co.	$ 4,375,000	
		(Mutual Life Insurance Co. of N. Y.	875,000	
		Total	$ 5,250,000	100.0

BONDS, DEBENTURES AND NOTES OF NATURAL GAS COMPANIES

HOLDINGS BY INSTITUTIONS

Company and Issue	Total Outstanding	Holding Institution	Amount	% of Total Outstanding
Oklahoma Natural Gas Co.				
Notes	$ 8,000,000	Various bank loans	$ 8,000,000	100.0
Panhandle Eastern Pipe Line Co.				
First Mtg. A, 4⅜, 1952	23,500,000(c)	(Equitable Life Assurance Society of U. S.	$ 5,000,000	
		(Massachusetts Mutual Life Ins. Co.	897,000	
		(Metropolitan Life Ins. Co.	4,400,000	
		(Mutual Life Insurance Co. of N. Y.	1,500,000	
		(Provident Mutual Life Ins. Co.	250,000	
		(Prudential Insurance Co. of America	1,000,000	
		(Sun Life Assurance Co. of Canada	2,930,756 (1)	
		(34 Other Institutions	8,034,000	
		Total	$19,016,756	80.9
Bank Loans	2,000,000	Various banks	$ 2,000,000	100.0
Southern California Gas Co.				
First Mortgage & Ref. 4⅛, 1965	15,000,000(c)	(Connecticut General Life Ins. Co.	500,000	
		(John Hancock Mutual Life Ins. Co.	300,000	
		(Massachusetts Mutual Life Ins. Co.	575,000	
		(New England Mutual Life Ins. Co.	250,000	
		(Pacific Mutual Life Ins. Co.	400,000	
		(Penn Mutual Life Ins. Co.	250,000	
		(66 Other Institutions	2,346,076	
		Total	$ 4,621,076	30.8
First Mtg. & Ref. 4¼, 1961	12,500,000(c)	(General American Life Ins. Co.	$ 200,000	
		(John Hancock Mutual Life Ins. Co.	200,000	
		(Massachusetts Mutual Life Ins. Co.	400,000	
		(Penn Mutual Life Ins. Co.	400,000	
		(Stanford University	300,000	
		(Supreme Council of the Royal Arcanum	200,000	
		(48 Other Institutions	1,430,174	
		Total	$ 3,130,174	25.0

BONDS, DEBENTURES AND NOTES OF NATURAL GAS COMPANIES

HOLDINGS BY INSTITUTIONS

Company and Issue	Total Outstanding	Holding Institution	Amount	% of Total Outstanding
Southern Counties Gas Co.				
First Mtg. 4½%, 1968	$11,500,000(c)	(Massachusetts Mutual Life Ins. Co.	$ 325,000	
		(Pacific Mutual Life Ins. Co.	400,000	
		(33 Other Institutions	1,342,140	
		Total	$ 2,067,140	18.0
Southern Natural Gas Co.				
First Mtg. P. L. 4⅓%, 1951	12,939,000(c)	(Insurance Co. of North America	$ 250,000	
		(Massachusetts Mutual Life Ins. Co.	400,000	
		(Metropolitan Life Ins. Co.	3,000,000	
		(Modern Woodmen of America	250,000	
		(Provident Mutual Life Ins. Co.	300,000	
		(Sun Life Assurance Co. of Canada	435,018 (1)	
		(Travelers Insurance Co.	300,000	
		(34 Other Institutions	1,335,000	
		Total	$ 6,270,018	48.5
First Mtg. P. L. 4⅓%, 1952	616,000(c)	(Metropolitan Life Ins. Co.	$ 616,000	100.0
Note 4⅓%	1,475,000(b)	(First National Bank, Birmingham, Ala.	$ 1,475,000	100.0
United Fuel Gas Co.				
Serial Notes, 4%, 1940-46	5,250,000(c)	(Metropolitan Life Ins. Co.	$ 4,375,000	
		(Mutual Life Ins. Co. of N. Y.	875,000	
		Total	$ 5,250,000	100.0
GRAND TOTAL			$153,572,164	

Notes: (1) Listed at book value.
(2) Moody's Public Utilities, 1939, shows entire amount of bonds sold to institutions.

Source of Data: (a) S.E.C. Holding Company Release No. 1731, dated September 26, 1939.
(b) Moody's Public Utilities, 1939.
(c) Poor's Institutional Holdings of Securities, 1939.
(d) S.E.C. Holding Company Release No. 1667, dated August 4, 1939.
(e) Standard Corporation Records.

Schedule No. 50
Page 1
3757

BONDS, DEBENTURES AND NOTES OF NATURAL GAS COMPANIES

HOLDINGS BY AFFILIATES

Company and Issue	Total Outstanding	Holding Affiliate	Amount	% of Total Outstanding
Arkansas-Louisiana Gas Co.				
Debentures, 4½%, 1955	$ 6,500,000	Arkansas Natural Gas Corp.	$ 6,500,000	100.0
Canadian River Gas Co.				
First Mtg. 6%	6,244,000	Colorado Interstate Gas Co.	$ 6,244,000	100.0
Chicago District Pipeline Co.				
Notes Payable	2,769,897	Natural Gas Investment Co.	$ 2,769,897	100.0
Cities Service Gas Co.				
Debentures 5½%, 1956	8,000,000	Cities Service Co. and subsidiaries	$ 8,000,000	100.0
Colorado Interstate Gas Co.				
1st & Coll. Trust 3½%, 1948	10,898,000	(Imperial Oil Ltd. (Standard Oil Co. (N.J.)	$ 6,033,000	55.4
Equitable Gas Co.				
Notes Payable	13,540,408	Affiliated Companies	$13,540,408	100.0
Houston Gulf Gas Co.				
7% Notes, 1945	1,900,000	United Gas Pipe Line Co.	$ 1,900,000	100.0
Indian Territory Illuminating Oil Co.				
Notes Payable	21,947,028	Cities Service Co.	$21,947,028	100.0

2726

BONDS, DEBENTURES AND NOTES OF NATURAL GAS COMPANIES

3759

HOLDINGS BY AFFILIATES

Company and Issue	Total Outstanding	Holding Affiliate	Amount	% of Total Outstanding
Lone Star Gas Co.				
Notes, 4½, 1953	$19,600,000	Lone Star Gas Corp.	$19,600,000	100.0
Manufacturers Light and Heat Co. (The)				
Notes Payable	360,000	Columbia Gas & Electric Corp.	$ 360,000	100.0
Mississippi River Fuel Corp.				
Notes, 6%, 1940	3,010,000	(Standard Oil Co. (N.J.) (United Gas Corp. (Columbian Carbon Co. (United Carbon Co.	$ 3,010,000	100.0
Natural Gas Pipeline Co. of America				
1st Mtg. 6%, 1946	44,400,000	(Cities Service Co. (Natural Gas Investment Co. (Standard Oil Co. (N.J.) (Southwestern Development Co. (Texas Co. (Columbian Carbon Co.	$44,400,000	100.0
Ohio Fuel Gas Co.				
Notes	6,734,363	Columbia Gas & Electric Corp.	$ 6,734,363	100.0
Southern Natural Gas Co.				
Adjustment Mtg., 1960	5,771,523	Federal Water Service Corp.	$ 2,907,000	50.4
Texoma Natural Gas Co.				
Gas & P. L. Mtg., 6%, 1946	18,750,000	Natural Gas Pipeline Co. of America	$18,750,000	100.0

2727

BONDS, DEBENTURES AND NOTES OF NATURAL GAS COMPANIES

HOLDINGS BY AFFILIATES

Company and Issue	Total Outstanding	Holding Affiliate	Amount	% of Total Outstanding
United Fuel Gas Co.				
Notes	$13,036,278	Columbia Gas & Electric Corp.	$13,036,278	100.0
United Gas Pipe Line Co.				
Debentures 6%, 1952	23,000,000	United Gas Corp.	$23,000,000	100.0
Northern-Texas Utilities, 1st Mtg., 6%, 1940	910,000	Electric Bond & Share Co.	$ 910,000	100.0
GRAND TOTAL			$199,641,974	

PREFERRED STOCKS OF NATURAL GAS COMPANIES

HOLDINGS BY PUBLIC

Company	Issue	Total Outstanding	Held by Public (a)	Poor's Rating	Times Dividend Requirements Earned 1938	Times Fixed Charges & Dividends Earned 1938	Market Quo 1937 High	Market Quo 1937 Low	Market Quo 1 High
El Paso Natural Gas Co.	7% Cum. Pref. - Par $100	$ 1,479,700	$ 1,479,700	B**	20.12	4.73	-	-	-
Houston Gulf Gas Co.	7% Pref. Series A - Par $100	806,300	11,100	C*	1.08	1.02	-	-	-
" " " "	7% Pref. Series B - Par $100	1,500,000	1,000	C*	1.08	1.02	-	-	-
Oklahoma Natural Gas Co. (b)	$5.50 Conv. Prior Pref. - Par $100	5,800,000	5,800,000	B*	4.20 (c)	1.50	-	-	-
" " " "	$3 Pref. - Par $50	4,552,500	4,552,500	B	3.74 (c)	1.32	32 5/8	19½	41½
Southern California Gas Co.	6% Cum. Pref. - Par $25	3,998,900	2,961,800	A*	4.29	2.66	31 3/4	28½	31 3/
" " " "	6% Cum. Pref.Series A, Par $25	19,575,800	19,575,800	A*	4.29	2.66	31	27½	32
TOTAL		$ 37,713,200	$34,381,900	-	-	-	-	-	-

Notes: (a) The difference between Total Outstanding and Held by Public, is held by Affiliates.
(b) Sold in August 1939.
(c) Computed on basis of Preferred Dividends requirements on stock outstanding in September 1939, and 1938 Earnings.
(d) Weighted yield on issues represented.

Schedule No. 5D

PREFERRED STOCKS OF NATURAL GAS COMPANIES

HOLDINGS BY PUBLIC

Total Outstanding	Held by Public (a)	Poor's Rating	Times Dividend Requirements Earned 1938	Times Fixed Charges & Dividends Earned 1938	Market Quotations 1937 High	1937 Low	1938 High	1938 Low	1939 Latest		Current Yield
$ 1,479,700	$ 1,479,700	B**	20.12	4.73	-	-	-	-	9/30	108	6.48
806,300	11,100	C*	1.08	1.02	-	-	-	-		-	-
1,500,000	1,000	C*	1.08	1.02	-	-	-	-		-	-
100 5,800,000	5,800,000	B*	4.20 (c)	1.50	-	-	-	-	9/30	104½	5.26
4,552,500	4,552,500	B	3.74 (c)	1.32	32 5/8	19½	41½	21½	9/30	42½	7.10
3,998,900	2,961,800	A*	4.29	2.66	31 3/4	28½	31 3/8	28½	9/30	30	5.00
19,575,800	19,575,800	A*	4.29	2.66	31	27½	32	27½	9/30	30½	4.96
$ 37,713,200	$34,381,900	-	-	-	-	-	-	-		-	5.35 (d)

y Public, is held by Affiliates.

ts on stock outstanding in September 1939, and 1938 Earnings.

PREFERRED STOCKS OF NATURAL GAS COMPANIES

HOLDINGS BY AFFILIATES

Company and Issue	Total Outstanding	Holding Affiliate	Amount	% of Total Outstanding
Colorado Interstate Gas Co.				
6% Preferred - Par $100	$ 2,000,000	Standard Oil Co. (N.J.)	$1,000,000	50.0
		Consolidated Oil Corp.	1,000,000	50.0
			$2,000,000	100.0
East Ohio Gas Co.				
7% Cum. Preferred - Par $100	10,000,000	Standard Oil Co. (N.J.)	$10,000,000	100.0
Houston Gulf Gas Co.				
7% Cum. Preferred, A - Par $100	806,300	United Gas Corp.	$ 795,200	98.6
7% Cum. Preferred, B - Par $100	1,500,000	United Gas Corp.	1,499,000	99.9
Panhandle Eastern Pipe Line Co.				
$6 Preferred, A - Par $100	10,000,000	Columbia Oil & Gasoline Corp.	$10,000,000	100.0
$6 Preferred, B - Par $100	1,000,000	Columbia Oil & Gasoline Corp.	$1,000,000	100.0
Southern California Gas Co.				
6% Cum. Preferred - Par $25	3,998,900	Pacific Lighting Corp.	$ 1,037,100	26.0
Grand Total			$26,331,300	

Source of Data: Moody's Public Utilities, 1939

Schedule No. 57

2730

COMMON STOCKS OF NATURAL GAS COMPANIES

HOLDINGS BY PUBLIC

Company	Total Outstanding Shares	Total Outstanding Amount	Total Held by Public (a) Shares	Total Held by Public (a) Amount	Par Value	Earnings per Share	Per Share Dividends Paid 1938	Poor's Rating	1937 High	1937 Low	1938 High	1938 Low	1939 Latest Quotation	Percent Earnings to Latest Quotations
El Paso Natural Gas Co.	600,853	$ 1,802,559(b)	600,853	$ 1,802,559	3.00	3.30	2.00	B	29	14 1/2	29 7/8	17	10/6 40 5/8	8.12
Houston Gulf Gas Co.	517,008	5,170,080	21,160	21,160	No Par	.03	-	-	-	-	-	-	-	-
Indian Territory Illuminating Oil Co. Class "A"	1,304,600	1,304,600	98,476	98,476	1.00	(.03)	-	C	4 7/8	1	1 1/2	3/4	9/30 2 (e)	(.015)
Class "B"	7,090,037	7,090,037	1,984,327	1,984,327	1.00	(.03)	-	C	4 7/8	1	1 5/8	7/8	9/30 1 1/2 (e)	(.02)
Interstate Natural Gas Co.	952,953	6,529,530	276,356	1,893,564(c)	No Par	2.13	1.75	B	33 1/2	17	25	17 1/2	9/30 23 1/2 (e)	9.06
Manufacturers Light & Heat Co.	450,608	22,530,400	126	6,300	50.00	3.96	Not Reported	-	-	-	-	-	-	-
Memphis Natural Gas Co.	918,680	4,593,400	476,323	2,381,615	5.00	.55	.45	B	7	2 1/4	4 7/8	3	9/30 4 5/8	11.89
Mountain Fuel Supply Co.	1,989,902	19,899,025	1,509,045	15,090,455	10.00	.38	.25	Cee	12 7/8	3 7/8	6 5/8	4 1/4	9/30 4 5/8 (e)	8.22
Oklahoma Natural Gas	549,986	8,249,790	549,986	8,249,790	15.00	1.70	-	Bee	14 3/4	6 5/8	14 1/2	6 3/4	9/30 15 7/8	10.71
South Penn Oil Co.	1,000,000	25,000,000	827,257	20,681,425	25.00	1.44	1.75	-	56	35	39	28 3/4	9/30 39	3.69
Southern Natural Gas Co. (d)	691,970	5,189,776	359,825	2,698,687	7.50	1.37(d)	.50(f)	-	-	-	-	-	9/30 13 1/2 (e)	10.15
Total		$107,359,197	-	$54,848,338		-	-	-	-	-	-	-	-	7.33 (g)

Notes: (a) The difference between Total Outstanding and Held by Public, is held by Affiliates.
(b) Exclusive of premium on Common Stock of $3,486,435.
(c) Based on average value per share.
(d) Based on common stock issued in May 1939.
(e) Bid prices.
(f) Represents initial dividend paid 6/30/39.
(g) Weighted average based only on stocks with earnings.

2731

3769

COMMON STOCKS OF NATURAL GAS COMPANIES

HOLDINGS BY AFFILIATES

Company and Issue	Total Outstanding	Holding Affiliate	Amount	% of Total Outstanding
Arkansas-Louisiana Gas Co.				
Common - 295,988 shs. - Par $50	$14,949,400	Arkansas Natural Gas Corp.	$14,949,400	100.0
Canadian River Gas Co.				
Common	1	Southwestern Development Co.	$ 1	100.0
Chicago District Pipeline Co.				
Common - 1,000 shs. - No Par	10,000	Natural Gas Investment Co.	$ 10,000	100.0
Cities Service Gas Co.				
Common - 300,000 shs. - No Par	30,000,000	Empire Gas & Fuel Co.	$30,000,000	100.0
Colorado Interstate Gas Co.				
Common - 1,250,000 shs. - No Par	2,352,941	(Southwestern Development Co. (42½%) (Standard Oil Co. (N.J.) (42½%) (Public Service Co. of Colo. (15%)	$ 2,352,941	100.0
East Ohio Gas Co.				
Common - Par $100	28,500,000	Standard Oil Co. (N.J.)	$28,500,000	100.0
Equitable Gas Co.				
Common - Par $100	3,300,000	Pittsburgh & West Virginia Gas Co.	$ 3,300,000	100.0
Hope Natural Gas Co.				
Common - Par $100	27,969,300	Standard Oil Co. (N.J.)	$27,969,300	100.0

COMMON STOCKS OF NATURAL GAS COMPANIES

HOLDINGS BY AFFILIATES

Company and Issue	Total Outstanding	Holding Affiliate	Amount	% of Total Outstanding
Houston Gulf Gas Co.				
Common - 517,008 shs. - No Par	$ 5,170,080	United Gas Pipe Line Co.	$ 5,148,920	99.6
Indian Territory Illuminating Oil Co.				
Common A - 1,304,600 shs. - Par $1 (a)	1,304,600	Cities Service Co.	$ 1,206,124	92.5
Common B - 7,090,037 shs. - Par $1 (a)	7,090,037	(Empire Gas & Fuel Co.	$ 4,863,689	68.6
		(Cities Service Co.	302,021	4.3
			$ 5,165,710	72.9 Voting Stock
Interstate Natural Gas Co.				
Common - 952,953 shs. - No Par	6,529,530	(Standard Oil Co. (N.J.) (54%) (Columbian Carbon Co. (17%)	$ 4,635,966	71.0
Iriquois Gas Corp.				
Common - Par $100	22,671,400	National Fuel Gas Co.	$22,671,400	100.0
Lone Star Gas Co.				
Common - 540,000 shs. - No Par	28,113,220	Lone Star Gas Corp.	$28,113,220	100.0
Manufacturers Light and Heat Co., The				
Common - Par $50	22,530,400	Columbia Gas & Electric Corp.	$22,524,100	99.7
Memphis Natural Gas Co.				
Common - Par $5	4,593,400	Commonwealth Gas Corp.	$ 2,211,785	48.2
Mississippi River Fuel Corp.				
Common - Par $10	6,552,200	(Standard Oil Co. (N.J.) (22%) (United Gas Corp. (46%) (Columbian Carbon Co. (17%) (United Carbon Co. (15%)	$ 6,552,200	100.0

COMMON STOCKS OF NATURAL GAS COMPANIES

HOLDINGS BY AFFILIATES

Company and Issue	Total Outstanding	Holding Affiliate	Amount	% of Total Outstanding
Mountain Fuel Supply Co.				
Common - Par $10	$19,899,025	Ohio Oil Co., The	$ 4,808,570	24.37
Natural Gas Pipeline Co. of America				
Common - 1,500,000 shs. - No Par	3,000,000	(Cities Service Co. (26.629%) (Standard Oil Co. (N.J.) (13.3145%) (Texas Corp. (17.5832%) (Natural Gas Investment Co. (26.629%) (Southwestern Development Co. (13.3145%) (Columbian Carbon Co. (2.5298%)	$ 3,000,000	100.0
Northern Natural Gas Co.				
Common - 203,000 shs. - No Par	19,273,460	(Lone Star Gas Corp. (30%) (North American Light & Power Co. (35%) (United Light & Railways Co. (35%)	$19,273,460	100.0
Ohio Fuel Gas Co.				
Common - Par $50	67,190,150	Columbia Gas & Electric Corp.	$67,190,150	100.0
Panhandle Eastern Pipe Line Co.				
Common - 728,652 shs. - No Par	18,216,300	Columbia Oil & Gasoline Corp. (55.49%) Missouri Kansas Pipe Line Co. (44.51%)	$18,216,300	100.0
South Penn Oil Co.				
Common - Par $25	25,000,000	Tide Water Associated Oil Co.	$ 4,318,575	17.3
Southern California Gas Co.				
Common - Par $25	28,800,000	Pacific Lighting Corp.	$28,800,000	100.0
Southern Counties Gas Co. of California				
Common - Par $100	8,000,000	Pacific Lighting Corp.	$ 8,000,000	100.0

2734

3775

COMMON STOCKS OF NATURAL GAS COMPANIES

HOLDINGS BY AFFILIATES

Company and Issue	Total Outstanding	Holding Affiliate		Amount	% of Total Outstanding
Southern Natural Gas Co.					
Common - Par $7.50	$ 5,000,000	Federal Water Service Corp.		$ 2,491,109	48.0
Texoma Natural Gas Co.					
Common	500,000	(Cities Service Co.	(26.629%)	$ 500,000	100.0
		(Natural Gas Investment Co.	(26.629%)		
		(Southwestern Development Co.	(26.629%)		
		(Texas Corp.	(17.5832%)		
		(Columbian Carbon Co.	(2.5298%)		
United Fuel Gas Co.					
Common - Par $1	30,000,000	Columbia Gas & Electric Corp.		$30,000,000	100.0
United Gas Pipe Line Co.					
Common - 100,000 shs. - No Par	96,772,535	United Gas Corp.		$96,772,535	100.0
United Natural Gas Co.					
Common	15,125,000	National Fuel Gas Co.		$15,125,000	100.0
GRAND TOTAL				$503,806,766	

BONDS OF NATURAL GAS COMPANIES SOLD IN PERIOD FROM JANUARY 1, 1935 TO SEPTEMBER 30, 1939

COST OF MONEY TO ISSUING COMPANIES AND YIELD TO PUBLIC

Company	Approximate Offering Date	Issue	Principal Amount	Net Cost to C Amount	Co
		Moody's Aaa Rating			
Southern California Gas Co.	July 1935	1st & Ref. Mtg. 4%, 1965	$ 15,000,000	98.09	4
		Moody's A Rating			
Arkansas-Louisiana Gas Co.	July 1936	1st Mtg. 4%, 1951	$ 10,000,000	93.29	4.
Panhandle Eastern Pipe Line Co.	March 1937	1st Mtg. & 1st Lien, 4%, 1952	24,000,000	95.02	4.
			$ 34,000,000	-	
		Moody's Baa Rating			
Oklahoma Natural Gas Co.	June 1936	1st Mtg. A, 4½%, 1951	$ 20,000,000	94.89	4.
" " " "	August 1939	1st Mtg. B, 3 3/4%, 1955	17,000,000	(a)	(
Southern Natural Gas Co.	November 1936	1st Mtg. Pipe Line, 4½%, 1951	15,000,000	96.29	4.
			$ 52,000,000	-	
		Moody's Ba Rating			
El Paso Natural Gas Co. (c)	June 1936	1st Mtg. 4½%, 1951	$ 7,500,000	94.14	5
Northern Oklahoma Gas Co.	March 1936	1st Mtg. & Coll. Trust, S.F. 5%, 1946	1,000,000	93.58	5
			$ 8,500,000	-	
		No Rating Assigned (All Issues Privately Sold)			
Mississippi River Fuel Corp.	February 1937	1st Mtg. P. L. 4%, 1952	$ 10,000,000	(a)	(
Southern Natural Gas Co.	October 1937	1st Mtg. P. L. 4½%, 1952	650,000	(a)	(
El Paso Natural Gas Co.	October 1937	1st Mtg. B, 4%, 1952	1,200,000	(a)	(
" " " " "	December 1938	1st Mtg. 3 1/2%, 1953	6,000,000	(a)	(
Cities Service Gas Co.	December 1938	1st Mtg. P.L. 3 3/4%, 1947-54	20,000,000	(a)	(
Arkansas-Louisiana Gas Co.	September 1939	1st Mtg. 2 3/4%, A, 1940-44	3,300,000	(a)	(
" " " "	September 1939	1st Mtg. 3½%, B, 1945-54	9,700,000	(a)	(
Northern Natural Gas Co.	August 1939	1st Mtg. 3¼%, A, 1954	16,000,000	(a)	(
			$ 66,850,000		
		Grand Total	$176,350,000	-	

Notes: (a) Net cost to company not available.
(b) Assumed price of par.
(c) El Paso Natural Gas Company's First Mtg. 4½% Bonds, due in 1951, were retired on January 16, 1939. The funds for the purpose were obtained from the sale in December 1938 of $6,000,000 First Mtg. 3½% Bonds, due in 1953, and from bank loans.

Source of Data: Issues in Period from January 1, 1935 to December 31, 1938 from "Security Issues of Electric and Gas Utilities, 1935-1936-1937-193 Exchange Commission. Issues in Period from January 1, 1939 to September 30, 1939 from "Supplements to Moody's Public Utilities".

TURAL GAS COMPANIES SOLD IN PERIOD FROM JANUARY 1, 1935 TO SEPTEMBER 30, 1939

3777

COST OF MONEY TO ISSUING COMPANIES AND YIELD TO PUBLIC

Issue	Principal Amount	Net Cost to Company Amount	Net Cost to Company Cost %	Price to Public Amount	Price to Public Yield %
Moody's Aaa Rating					
1st & Ref. Mtg. 4%, 1965	$ 15,000,000	98.09	4.11	101.50	3.91
Moody's A Rating					
1st Mtg. 4%, 1951	$ 10,000,000	93.29	4.62	98.00	4.18
1st Mtg. & 1st Lien, 4%, 1952	24,000,000	95.02	4.46	97.50	4.23
	$ 34,000,000	-	-	97.65	4.22
Moody's Baa Rating					
1st Mtg. A, 4½%, 1951	$ 20,000,000	94.89	4.99	98.50	4.64
1st Mtg. B, 3 3/4%, 1955	17,000,000	(a)	(a)	103.50	3.46
1st Mtg. Pipe Line, 4½%, 1951	15,000,000	96.29	4.85	100.00	4.50
	$ 52,000,000	-	-	100.57	4.21
Moody's Ba Rating					
1st Mtg. 4½%, 1951	$ 7,500,000	94.14	5.06	98.50	4.64
1st Mtg. & Coll. Trust, S.F. 5%, 1946	1,000,000	93.58	5.85	100.00	5.00
	$ 8,500,000	-	-	98.68	4.68
No Rating Assigned (All Issues Privately Sold)					
1st Mtg. P. L. 4%, 1952	$ 10,000,000	(a)	(a)	100.00(b)	4.00
1st Mtg. P. L. 4½%, 1952	650,000	(a)	(a)	97.75	4.71
1st Mtg. B, 4%, 1952	1,200,000	(a)	(a)	97.75	4.20
1st Mtg. 3 1/2%, 1953	6,000,000	(a)	(a)	99.00	3.59
1st Mtg. P.L. 3 3/4%, 1947-54	20,000,000	(a)	(a)	100.00	3.75
1st Mtg. 2 3/4%, A, 1940-44	3,300,000	(a)	(a)	100.00	2.75
1st Mtg. 3½%, B, 1945-54	9,700,000	(a)	(a)	100.00	3.50
1st Mtg. 3½%, A, 1954	16,000,000	(a)	(a)	100.00	3.25
	$ 66,850,000			99.85	3.59
	$176,350,000	-	-	99.72	3.97

Bonds, due in 1951, were retired on
were obtained from the sale in
nds, due in 1953, and from bank loans.

December 31, 1938 from "Security Issues of Electric and Gas Utilities, 1935-1936-1937-1938", issued by Securities and
on January 1, 1939 to September 30, 1939 from "Supplements to Moody's Public Utilities".

Schedule

2736

PREFERRED STOCKS OF NATURAL GAS COMPANIES SOLD IN PERIOD FROM JANUARY 1, 1935 TO SEPTEMBER 30, 1939

YIELD TO PUBLIC

Company	Approximate Offering Date	Issue	Poor's Rating	Number of Shares	Price to Public	
					Per Share	Total
Oklahoma Natural Gas Co. (a) (1)	October 1936	Prior Pfd. Stock Conv. 6%, $100 par	B*	22,200	100.00	$2,220,000
Oklahoma Natural Gas Co. (2)	August 1939	$5.50 Prior Pfd. Stock, no par	B*	58,000	104.00	6,032,000
Total				-	-	$8,252,000

Note: (a) This issue was called for redemption on October 7, 1939. The funds for the purpose were obtained from sale of $5.50 prior pfd. stock in August 1939.

Source of Data:

(1) "Security Issues of Electric and Gas Utilities, 1935-1936-1937-1938", Issued by Securities and Exchange Commission.
(2) Supplements to Moody's Public Utilities.

Schedule No. 7

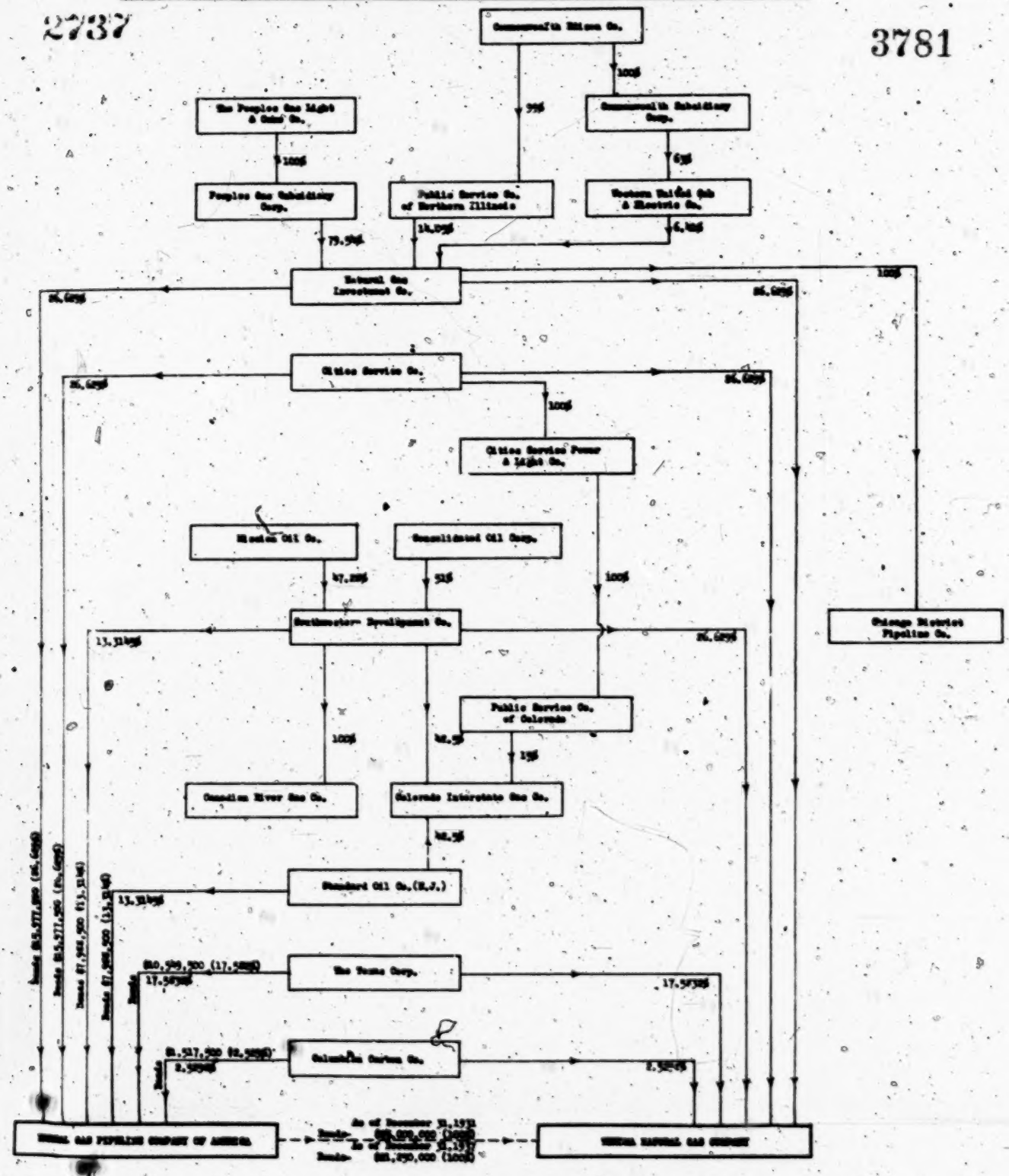
URAL GAS COMPANIES SOLD IN PERIOD FROM JANUARY 1, 1935 TO SEPTEMBER 30, 1939

YIELD TO PUBLIC

Issue	Poor's Rating	Number of Shares	Price to Public: Per Share	Price to Public: Total	Yield %
Stock Conv. 6%, $100 par	B*	22,200	100.00	$2,220,000	6.00
Pfd. Stock, no par	B*	58,000	104.00	6,032,000	5.29
		-	-	$8,252,000	5.48

The funds for the purpose were
9.

935-1936-1937-1938", Issued by Securities and Exchange Commission.


Commonwealth Edison Co.
100%
99%
The Peoples Gas Light & Coke Co.
Commonwealth Subsidiary Corp.
6%
100%
Peoples Gas Subsidiary Corp.
Public Service Co. of Northern Illinois
Western United Gas & Electric Co.
79.5%
14.05%
6.45%
Natural Gas Investment Co.
100%
86.62%
86.62%
Cities Service Co.
86.62%
86.62%
100%
Cities Service Power & Light Co.
Mission Oil Co.
Consolidated Oil Corp.
47.28%
51%
100%
Southwestern Development Co.
Chicago District Pipeline Co.
13.31%
86.62%
Public Service Co. of Colorado
100%
48.5%
15%
Canadian River Gas Co.
Colorado Interstate Gas Co.
48.5%
Standard Oil Co.(N.J.)
13.31%
Bonds $15,577,000 (86.69%)
Bonds $15,577,000 (86.69%)
Bonds $7,944,500 (13.31%)
Bonds $7,944,500 (13.31%)
$60,599,200 (17.58%)
17.58%
The Texas Corp.
17.58%
Bonds
$8,527,900 ($2,972,100)
2.58%
Columbia Carbon Co.
2.58%
Bonds
NATURAL GAS PIPELINE COMPANY OF AMERICA
As of December 31, 1932
Bonds $22,000,000 (100%)
As of December 31, 1933
Bonds $21,250,000 (100%)
TEXAS EASTERN GAS COMPANY

278

Schedule No. 8
Page 1

Recent Financing by Companies Affiliated (Directly and Indirectly) with Natural Gas Pipeline Company of America and Texoma Natural Gas Company

Company	Date	Issue	Yield to Purchasers
Standard Oil Company (N. J.)	May 1936	$30,000,000 Debentures 3%, 1961, sold at 98	3.12% (1)
" " " "	" "	$55,000,000 Debentures 3%, 1961, sold at 98—Private sale to Rockefeller Foundations	3.12% (1)
" " " "	July 1938	$50,000,000 Debentures 2¾%, 1953, sold at 99	2.83% (2)
" " " "	" "	$31,000,000 Serial Notes 1¾%-2¼%, 1943-47, sold at 100	1.75-2.50% (2)
The Texas Corporation	June 1936	$60,000,000 Debentures 3½%, 1951, sold at 100	3.50% (1)
" " "	April 1939	$40,000,000 Debentures 3%, 1959, sold at 101	2.93% (3)
Consolidated Oil Corporation	June 1936	$50,000,000 Debentures 3½%, 1951, sold at 98	3.67% (1)
" " "	Aug. 1938	$25,000,000 Debentures 3¼%, 1950, sold privately at 100	3.38% (4)
Public Service Company of Northern Illinois	Oct. 1938	$80,000,000 First Mtge. 3½%, 1968, sold at 103	3.34% (5)

279

Page 2

Commonwealth Edison Company	June 1938	$33,000,000 First Mtge. I, 3½%, 1968, sold at 102.25	3.38% (5)
" " "	Aug. 1938	$33,000,000 First Mtge. I, 3½%, 1968, sold at 103.50	3.31% (5)
" " "	Nov. 1938	$34,000,000 First Mtge. I, 3½%, 1968, sold at 104	3.29% (5)
" " "	June 1938	$39,083,195 Debentures, 3½%, 1958, sold at 100	3.50% (5)
" " "	Aug. 1938	$39,250,000 Debentures, 3½%, 1958, sold at 100	3.50% (5)
" " "	Dec. 1938	$24,896,900 Debentures, 3½%, 1958, sold at 100	3.50% (5)
The Peoples Gas Light & Coke Company	May 1936	$22,000,000 First & Ref. Mtge. D, 4%, 1961, sold at 97.50	4.16% (5)

The following in reference to recent short-term financing by The Peoples Gas Light & Coke Company, is from The Commercial and Financial Chronicle, April 22, 1939:

"Peoples Gas Light & Coke Co. Notes—

Company sold $2,500,000 of promissory notes to five Chicago banks on March 9, and used the proceeds together with other funds to retire $3,000,000 in promissory notes, maturing serially from May 31, 1940 to May 31, 1942, at 100¼. The new promissory notes include $500,000 bearing interest at 1½% and maturing May 31, 1940; $1,000,000 at 1¾%, due 1941; and $1,000,000 of 2% notes due 1942. The new notes are secured by pledge of $2,752,000 of Natural Gas Pipeline Company of America first mortgage pipeline and collateral 6% bonds, series A, due 1946, and are redeemable at any time on 30 days notice at 100¼ in multiples of $500,000. Upon retirement of $3,000,000 promissory notes, the banks released $3,312,000 of Natural Gas Pipeline Company of America 6% first mortgage pipeline and collateral bonds."

Sources of Information:
(1) Moody's Industrials, 1938
(2) Moody's Industrials Supplement, July 9, 1938.
(3) Moody's Industrials Supplement, April 15, 1939.
(4) Moody's Industrials Supplement, September 28, 1938.
(5) Security Issues of Electric and Gas Utilities 1935-1936-1937-1938 (Issued by Securities and Exchange Commission)

2741

EXHIBIT 187

Natural Gas Pipeline Company of America
And
Texoma Natural Gas Company
(Combined Companies)

Comparative Statement of Combined Profit and Loss
For 5 Months Ended August 31, 1939 and 1938

Line No.		8 Months Ended Aug. 31, 1939	8 Months Ended Aug. 31, 1938	Increase or Decrease*
1	Gross Earnings from operations	$10,460,897.18	$9,457,471.97	$1,003,425.21
2	Operating Expenses	3,233,293.23	3,032,386.72	200,906.51
3	Net Earnings from Operation	$ 7,227,603.95	$6,425,085.25	$ 802,518.70
4	Non-Operating Income	677.76	12,877.82	12,200.06*
5	Net Earnings of Company	$ 7,228,281.71	$6,437,963.07	$ 790,318.64*
	Less: Other Charges			
6	Interest Expense	$ 1,819,056.36	$1,356,759.25	$ 137,702.89*
7	Amortization of Bond Discount and Expense	170,167.32	170,167.32	—
8	Depreciation	1,358,804.20	1,208,667.22	150,136.98
9	Depletion	189,549.89	165,598.40	23,951.49
10	Retirement Expense	205,920.14	680,971.50	475,051.36*
11	Total Other Charges	$ 3,743,497.91	$4,182,163.69	$ 438,665.78*
12	Net Earnings Available for Dividends	$ 3,484,783.80	$2,255,799.38	$1,228,984.42
13	Dividends	1,500,000.00	1,687,000.00	187,000.00*
14	Balance	$ 1,984,783.80	$ 568,799.38	$1,415,984.42

(*) Negative amounts.

2743 EXHIBIT 188.

Natural Gas Pipeline Company of America
and
Texoma Natural Gas Company
(Combined Companies)
Proforma Comparative Balance Sheets
Annually at December 31, from 1939 to 1954
and After Lquidation

2744 Natural Gas Pipeline Company of America
and
Texoma Natural Gas Company

Index.

	Schedule Number	Page Number
Assumptions		1
Comparative Balance Sheets Based on Admitted Earnings and Amortization of Capital Assets on Arbitrary Straight Line Estate	1	2
Comparative Balance Sheets Based on Admitted Earnings and Amortization of Capital Assets on Arbitrary Sinking Fund Basis	2	3
Comparative Balance Sheets Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40 and Amortization of Capital Assets on Arbitrary Straight Line Basis	3	4
Comparative Balance Sheets Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40 and Amortization of Capital Assets on Arbitrary Sinking Fund Basis	4	5
Capital Assets	5	6
Cash Based on Admitted Earnings	6a	7

	Schedule Number	Page Number
Cash Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40	6b	8
Other Net Current Assets Based on Admitted Earnings	7a	9-10
Other Net Current Assets Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40	7b	11
Bond Discount and Expense	8	12
Debt Obligations Based on Admitted Earnings	9a	13
Debt Obligations Based on Admitted Earnings after Peflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40	9b	14
Reserves for Amortization of Property Arbitrary Straight Line Basis	10a	15
Reserves for Amortization of Property Arbitrary Sinking Fund Basis	10b	16
Surplus Based on Admitted Earnings and Amortization of Capital Assets on Arbitrary Straight Line Basis	11a	17
Surplus Based on Admitted Earnings and Amortization of Capital Assets on Arbitrary Sinking Fund Basis	11b	18
Surplus Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 11/1/40 and Amortization of Capital Assets on Arbitrary Straight Line Basis	11c	19
Surplus Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 11/1/40 and Amortization of Capital Assets on Arbitrary Sinking Fund Basis	11d	20
Expenditures for Capital Assets	12	21
Net Cost of Retirements	13	22
2745 Computation of Annual Accrual on Arbitrary Sinking Fund Basis	14	23

	Schedule Number	Page Number
Bond and Interest on Bonds	15	24-25
Net Cash from Profits Based on Admitted Earnings	16a	26
Net Cash from Profits Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40	16b	27
Federal and State Income Tax Based on Admitted Earnings	17a	28
Federal and State Income Tax Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40	17b	29
Net Profits from Earnings Based on Admitted Earnings and on Amortization of Capital Assets on Arbitrary Straight Line Basis	18a	30
Net Profits from Earnings Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40 and on Amortization of Capital Assets on Arbitrary Straight Line Basis	18b	31
Borrowings and Interest on Borrowings Based on Admitted Earnings	19a	32
Borrowings and Interest on Borrowings Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40	19b	33-35
Interest Paid and Accrued Based on Admitted Earnings	20a	36
Interest Paid and Accrued Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40	20b	37
Liquidation Entries	21a	38
Liquidation Entries Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40	21b	39

2746 **Assumptions.**

A. Dividends: Cash dividends are to be paid each year at 25% of the stated value of the Capital Stock of Natural Gas Pipeline Company of America, outstanding January 1, 1939. No dividends are to be paid on the Capital Stock of Texoma Natural Gas Company until liquidation.

B. Other Net Current Assets: This caption reflects changes in Taxes Accrued resulting from the payment of Federal and State Income Taxes in the year following accrual and changes in Interest Payable based on assumptions of borrowings and repayments. Changes in current assets other than cash and changes in current liabilities other than Taxes Accrued and Interest Payable, have been assumed to be offsetting.

C. Salvage: This item was assumed to represent either cash value realized or materials reused during the year for which estimated.

D. Borowings: The borrowings were assumed to be made fifteen days in advance of the date on which the Company is obligated to make its sinking fund payments to retire bonds. Interest is assumed to be 6%, so that in effect the bonds due to be retired under the provisions of the Company's mortgage will be extended by the holders thereof for the additional period required. Interest on borrowings is assumed to be payable every six months. Repayments of borrowings are assumed to be made on the semi-annual date at which the recurring six months interest becomes due.

2747

NATURAL GAS PIPELINE COMPANY OF AMERICA
AND
TEXOMA NATURAL GAS COMPANY

(Combined Companies)

COMPARATIVE BALANCE SHEETS
BASED ON ADMITTED EARNINGS AND AMORTIZATION OF CAPITAL
ASSETS ON ARBITRARY STRAIGHT LINE BASIS

		Assets					Liabilities and Net			
Line No.	December 31 (a)	Capital Assets (b)	Cash (c)	Other Net Current Assets (d)	Bond Discount and Expense (e)	Total Assets (f)	Debt Obligations (g)	Reserves for Amortization of Capital Assets (h)	Capital Stock (i)	Surpl (j)
1	1939	$59,951,447	$ 1,054,046	$ 538,304	$1,777,446	$63,321,245	$42,300,000	$16,190,548	$3,500,000	$ 1,330
2	1940	61,083,172	1,720,347	329,833	1,523,527	64,656,879	37,700,000	19,814,390	3,500,000	3,642
3	1941	62,176,407	1,970,038	296,679	1,269,606	65,712,730	32,700,000	23,428,723	3,500,000	6,084
4	1942	63,429,432	1,585,445	214,746	1,015,685	66,245,308	26,900,000	27,114,881	3,500,000	8,730
5	1943	64,215,755	1,747,282	188,223	761,764	66,913,024	21,100,000	30,781,427	3,500,000	11,531
6	1944	64,872,174	1,417,151	135,558	507,843	66,932,726	14,400,000	34,414,729	3,500,000	14,617
7	1945	65,615,784	1,127,310	61,505	253,922	67,058,521	7,700,000	37,930,946	3,500,000	17,927
8	1946	66,525,700	176,394	12,738		66,714,832	300,000	41,496,870	3,500,000	21,417
9	1947	67,247,761	6,712,897	111,463*		73,849,195		45,166,318	3,500,000	25,182
10	1948	67,817,611	13,567,832	122,097*		81,263,350		48,842,180	3,500,000	28,921
11	1949	68,277,667	20,478,639	126,936*		88,629,370		52,580,085	3,500,000	32,54(
12	1950	68,742,765	27,374,534	122,219*		95,995,080		56,314,208	3,500,000	36,18(
13	1951	69,079,883	34,369,269	138,065*		103,311,087		60,039,929	3,500,000	39,77
14	1952	69,152,033	41,304,307	126,651*		110,335,689		63,768,198	3,500,000	43,06
15	1953	69,177,875	46,123,306	273,803		115,574,984		67,532,191	3,500,000	44,54
16	1954	69,179,314	46,250,230	1,213,500		116,643,044		69,105,182	3,500,000	44,03
17			47,537,862			47,537,862			3,500,000	44,03
Source									Ex. 137 Pg. 1 L 21	
Data		Sch. 5, Col. g	Sch. 6a, Col. g	Sch. 7a, Col. e	Sch. 8, Col. c	Col. b+c+d+e	Sch. 9a, Col. e	Sch. 10a, Col. e		Sch. 1 Col.

* Negative amounts

NATURAL GAS PIPELINE COMPANY OF AMERICA
AND
TEXOMA NATURAL GAS COMPANY

(Combined Companies)

COMPARATIVE BALANCE SHEETS
BASED ON ADMITTED EARNINGS AND AMORTIZATION OF CAPITAL ASSETS ON ARBITRARY STRAIGHT LINE BASIS

Sch. 1

ts				Liabilities and Net Worth				
	Other Net Current Assets (d)	Bond Discount And Expense (e)	Total Assets (f)	Debt Obligations (g)	Reserves for Amortization of Capital Assets (h)	Capital Stock (i)	Surplus (j)	Total Liabilities and Net Worth (k)
$	538,304	$1,777,448	$63,321,245	$42,300,000	$16,190,548	$3,500,000	$ 1,330,697	$63,321,245
	329,833	1,523,527	64,656,879	37,700,000	19,814,390	3,500,000	3,642,489	64,656,879
	296,679	1,269,606	65,712,730	32,700,000	23,428,723	3,500,000	6,084,007	65,712,730
	214,746	1,015,685	66,245,308	26,900,000	27,114,881	3,500,000	8,730,427	66,245,308
	188,223	761,761	66,913,024	21,100,000	30,781,427	3,500,000	11,531,597	66,913,024
	135,558	507,843	66,932,726	14,400,000	34,414,729	3,500,000	14,617,997	66,932,726
	61,505	253,922	67,058,521	7,700,000	37,930,946	3,500,000	17,927,575	67,058,521
	12,738		66,714,832	300,000	41,496,870	3,500,000	21,417,962	66,714,832
	111,463		73,849,195		45,166,338	3,500,000	25,182,877	73,849,195
	122,097		81,263,350		48,842,180	3,500,000	28,921,170	81,263,350
	126,936		88,629,370		52,580,085	3,500,000	32,549,285	88,629,370
	122,219		95,995,080		56,314,208	3,500,000	36,180,872	95,995,080
	138,065		103,311,087		60,039,929	3,500,000	39,771,158	103,311,087
	126,651		110,335,689		63,768,198	3,500,000	43,067,491	110,335,689
	273,803		115,574,984		67,532,191	3,500,000	44,542,793	115,574,984
	1,213,500		116,643,044		69,105,182	3,500,000	44,037,862	116,643,044
			47,537,862			3,500,000	44,037,862	47,537,862

Ex. 137
Pg. 1
L 21

g	Sch. 7a, Col. e	Sch. 8, Col. c	Col. b+c+d+e	Sch. 9a, Col. e	Sch. 10a, Col. e		Sch. 11a, Col. e	Col. g+h+i+j

NATURAL GAS PIPELINE COMPANY OF AMERICA
AND
TEXOTA NATURAL GAS COMPANY
(Combined Companies)

COMPARATIVE BALANCE SHEETS
BASED ON ARBITRARY EARNINGS AND AMORTIZATION OF CAPITAL ASSETS
ON ARBITRARY SINKING FUND BASIS

Line No.	December 31	Assets					Liabilities and Net Worth			
		Capital Assets	Cash	Other Net Current Assets	Bond Discount and Expenses	Total Assets	Debt Obligations	Reserves for Amortization of Capital Assets	Capital Stock	Surplus
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
1	1939	$59,951,447	$1,054,046	$ 538,304	$1,777,448	$ 63,321,245	$42,300,000	$ 14,867,148	$3,500,000	$ 2,654,097
2	1940	61,083,172	1,720,347	329,833	1,523,527	64,656,879	37,700,000	17,318,370	3,500,000	6,138,509
3	1941	62,176,407	1,970,038	296,679	1,269,606	65,712,730	32,700,000	19,920,103	3,500,000	9,592,627
4	1942	63,429,432	1,585,445	214,746	1,015,685	66,245,308	26,900,000	22,763,431	3,500,000	13,081,877
5	1943	64,215,795	1,747,262	188,223	761,764	66,913,024	21,100,000	25,767,207	3,500,000	16,545,817
6	1944	64,672,174	1,417,151	135,558	507,843	66,932,726	14,400,000	28,928,809	3,500,000	20,103,917
7	1945	65,615,784	1,127,310	61,505	253,922	67,058,521	7,700,000	32,176,036	3,500,000	23,682,485
8	1946	66,525,700	176,394	12,738		66,714,832	300,000	35,688,010	3,500,000	27,226,822
9	1947	66,247,761	6,712,897	111,463*		73,849,155		39,531,628	3,500,000	30,817,567
10	1948	67,817,611	13,567,832	122,093*		81,263,350		43,623,700	3,500,000	34,139,650
11	1949	68,277,667	20,478,639	126,336*		88,629,370		48,034,555	3,500,000	37,094,815
12	1950	68,742,765	27,374,534	122,219*		95,995,080		52,714,058	3,500,000	39,781,022
13	1951	69,079,883	34,359,269	138,065*		103,311,087		57,674,119	3,500,000	42,136,968
14	1952	69,158,033	41,304,307	126,651*		110,335,639		62,943,358	3,500,000	43,892,331
15	1953	69,177,875	46,123,306	273,803		115,574,984		68,573,581	3,500,000	43,501,403
16	1954	69,179,314	46,250,230	1,213,500		116,643,044		69,105,182	3,500,000	44,037,862
17			47,537,862			47,537,862			3,500,000	44,037,862
SOURCE:									Rx.137, pg.1, L.21	
DATA:		Sch. 5, Col. g	Sch. 6a, Col. g	Sch. 7a, Col. e	Sch. 8, Col. c	Col. b+c+d+e	Sch. 9a, Col. e	Sch. 10b Col. g		Sch. 11b, Col. f

(*) Negative amount.

NATURAL GAS PIPELINE COMPANY OF AMERICA
AND
TEXOTA NATURAL GAS COMPANY

(Combined Companies)

COMPARATIVE BALANCE SHEETS
BASED ON ARBITRARY EARNINGS AND AMORTIZATION OF CAPITAL ASSETS
ON ARBITRARY SINKING FUND BASIS

Sch. 2

Assets				Liabilities and Net Worth				
Other Net Current Assets (d)	Bond Discount and Expenses (e)	Total Assets (f)		Debt Obligations (g)	Reserves for Amortization of Capital Assets (h)	Capital Stock (i)	Surplus (j)	Total Liabilities and Net Worth (k)
$ 538,304	$1,777,448	$ 63,321,245		$42,300,000	$ 14,867,148	$3,500,000	$ 2,654,097	$ 63,321,245
329,833	1,523,527	64,656,879		37,700,000	17,318,370	3,500,000	6,138,509	64,656,879
296,679	1,269,606	65,712,730		32,700,000	19,920,103	3,500,000	9,592,627	65,712,730
214,746	1,015,685	66,245,308		26,900,000	22,763,431	3,500,000	13,081,877	66,245,308
188,223	761,764	66,913,024		21,100,000	25,767,207	3,500,000	16,545,817	66,913,024
135,555	507,843	66,932,726		14,400,000	28,928,809	3,500,000	20,103,917	66,932,726
61,505	253,922	67,058,521		7,700,000	32,176,036	3,500,000	23,682,485	67,058,521
12,738		66,714,832		300,000	35,688,010	3,500,000	27,226,822	66,714,832
111,463*		73,849,195			39,531,628	3,500,000	30,817,567	73,849,195
122,093*		81,263,350			43,623,700	3,500,000	34,139,650	81,263,350
126,336*		88,629,370			48,034,555	3,500,000	37,094,815	88,629,370
122,219*		95,995,080			52,714,058	3,500,000	39,781,022	95,995,080
138,065*		103,311,087			57,674,119	3,500,000	42,136,968	103,311,087
126,651*		110,335,639			62,943,358	3,500,000	43,892,331	110,335,689
273,803		115,574,984			68,573,581	3,500,000	43,501,403	115,574,984
1,213,500		116,643,044			69,105,182	3,500,000	44,037,862	116,643,044
		47,537,862				3,500,000	44,037,862	47,537,862

Ex.137,
pg.1, l.21

Sch. 7a, Col. 3 | Sch. 8, Col. 6 | Col. b+c+d+e | Sch. 9a, Col. 6 | Sch. 10b Col. g | Sch. 11b, Col. f | Col. g+h+i+j

2749

NATURAL GAS PIPELINE COMPANY OF AMERICA
AND
TEXOMA NATURAL GAS COMPANY

(Combined Companies)

COMPARATIVE BALANCE SHEETS
BASED ON ADMITTED EARNINGS AFTER REFLECTING RATE REDUCTION OF $3,000,000 PER YEAR EFFECTIVE 1/1/40 AND AMORTIZATION OF CAPITAL ASSETS ON ARBITRARY STRAIGHT LINE BASIS

Sch. 3.

Line No.	December 31 (a)	Assets: Capital Assets (b)	Cash (c)	Other Net Current Assets (d)	Bond Discount and Expense (e)	Total Assets (f)	Liabilities and Net Worth: Debt Obligations (g)	Reserves for Amortization of Capital Assets (h)	Capital Stock (i)	Surplus (j)	Liab. N.
1	1939	$59,892,147	$2,034,026	536,304	$1,777,448	$64,321,245	$42,300,000	$ 16,190,548	$3,500,000	$1,330,697	$63
2	1940	61,053,172	220,347	847,709	1,523,527	63,644,755	39,200,000	19,814,390	3,500,000	1,160,365	63
3	1941	62,275,407	263,414	856,572	1,269,606	64,664,999	36,600,000	23,428,723	3,500,000	1,037,376	64
4	1942	63,429,432	273,314	725,009	1,015,685	65,443,440	33,900,000	27,114,881	3,500,000	928,559	65
5	1943	64,235,757	215,414	780,870	761,764	65,973,803	30,300,000	30,781,427	3,500,000	892,376	66
6	1944	64,812,174	287,430	714,626	507,843	66,322,073	27,500,000	34,414,729	3,500,000	967,344	66
7	1945	65,615,784	255,157	550,703	253,922	66,819,566	24,300,000	37,930,946	3,500,000	1,088,620	67
8	1946	66,525,700	246,439	529,741		67,301,380	21,200,000	41,496,870	3,500,000	1,104,510	67
9	1947	67,247,761	283,445	575,249		68,106,455	18,000,000	45,166,318	3,500,000	1,440,137	68
10	1948	67,847,511	283,092	545,753		68,676,356	14,400,000	48,842,120	3,500,000	1,934,236	68
11	1949	68,277,667	320,747	519,362		69,117,776	10,600,000	52,580,085	3,500,000	2,437,691	69
12	1950	68,742,765	333,340	501,318		69,577,023	6,500,000	56,334,205	3,500,000	3,103,815	69
13	1951	69,079,883	348,212	461,907		69,889,002	2,300,000	60,079,929	3,500,000	4,048,073	69
14	1952	69,158,933	2,523,722	436,898		72,118,553		63,768,198	3,500,000	4,850,455	72
15	1953	68,177,8[illegible]	4,[illegible],2[illegible]	326,[illegible]		74,910,899		67,532,491	3,500,000	3,878,408	74
16	1954	69,179,314	2,586,245	1,270,546		73,036,105		69,105,182	3,500,000	430,923	73
17			3,930,923			3,930,923			3,500,000	430,923	3

SOURCE: Ex.137; pg.1, L.21

DATA:	Sch.3, Col.g	Sch.[illegible] Col.g	Sch.[illegible] Col.b	Sch.[illegible] Col.c	Col.b+c+d+e	Sch.9b, Col.e	Sch.10a, Col.a	Sch.11c, Col.a	Col.

NATURAL GAS PIPELINE COMPANY OF AMERICA
AND
TEXOMA NATURAL GAS COMPANY

(Combined Companies)

COMPARATIVE BALANCE SHEETS
BASED ON ADMITTED EARNINGS AFTER REFLECTING RATE REDUCTION OF $3,000,000 PER YEAR EFFECTIVE 1/1/40 AND AMORTIZATION OF CAPITAL ASSETS ON ARBITRARY STRAIGHT LINE BASIS

Sch. 3

Assets			Liabilities and Net Worth				
Other Net Current Assets (d)	Bond Discount and Expense (e)	Total Assets (f)	Debt Obligations (g)	Reserves for Amortization of Capital Assets (h)	Capital Stock (i)	Surplus (j)	Total Liabilities and Net Worth (k)
536,3[illegible]	$1,777,445	$[illegible],321,245	$42,300,000	$ 16,190,548	$3,500,000	$1,330,697	$[illegible],321,245
847,709	1,523,527	[illegible],874,755	39,200,000	19,814,390	3,500,000	1,160,365	[illegible],874,755
856,572	1,269,606	[illegible],566,099	36,600,000	23,428,723	3,500,000	1,037,376	[illegible],566,099
725,009	1,015,685	[illegible],443,440	33,900,000	27,114,881	3,500,000	928,559	[illegible],443,440
780,670	761,764	[illegible],973,803	30,800,000	30,782,427	3,500,000	892,376	[illegible],973,803
714,626	507,843	[illegible],382,[illegible]73	27,300,000	34,414,129	3,500,000	967,344	[illegible],382,[illegible]73
650,[illegible]03	253,922	[illegible],819,5[illegible]6	24,300,000	37,930,940	3,500,000	1,088,620	[illegible],819,5[illegible]6
529,741		[illegible],331,350	21,200,000	41,486,870	3,500,000	1,105,010	[illegible],291,350
575,249		[illegible],106,455	18,000,000	45,166,318	3,500,000	1,440,137	[illegible],106,455
545,[illegible]75		[illegible],946,458	14,400,000	48,842,180	3,500,000	1,904,278	[illegible],946,458
519,362		[illegible],117,770	10,600,000	52,580,085	3,500,000	2,437,691	[illegible],117,776
501,318		[illegible],578,023	6,600,000	56,324,205	3,500,000	3,153,815	[illegible],578,023
461,907		[illegible],888,002	2,300,000	60,079,929	3,500,000	4,048,073	[illegible],888,002
436,[illegible]90		[illegible],118,[illegible]53		63,766,[illegible]98	3,500,000	4,550,455	[illegible],118,[illegible]53
326,[illegible]54		[illegible],910,899		67,532,[illegible]91	3,500,000	3,878,708	[illegible],910,899
1,270,[illegible]46		[illegible],035,105		69,105,162	3,500,000	430,923	[illegible],035,105
		3,930,923			3,500,000	430,923	3,930,923
					Ex.137, pg.1, L.21		
Sch. [illegible] Col. [illegible]	Sch. [illegible] Col. c	Col. [illegible]+[illegible]	Sch. 9b Col. e	Sch. 10a, Col. e		Sch. 11c Col. e	Col. [illegible]+[illegible]+[illegible]

2750

[illegible] GAS COMPANY OF LOUISIANA

AND

[illegible] NATURAL GAS COMPANY

(Combined Companies)

COMPARATIVE BALANCE SHEETS
BASED ON ADJUSTED EARNINGS AFTER REFLECTING RATE REDUCTION OF
$3,000,000 PER YEAR EFFECTIVE 1/1/40 AND AMORTIZATION OF
CAPITAL ASSETS OF ARBITRARY SINKING FUND BASIS

Line No.	December 31 (a)	Assets: Capital assets (b)	Cash (c)	Other Net Current Assets (d)	Bond Discount and Expense (e)	Total Assets (f)	Liabilities and Net Worth: Debt Obligations (g)	Reserves for Amortization of Capital Assets (h)	Capital Stock (i)	Surplus (j)	Total Liabilities and Net Worth (k)
1	1939	$59,951,447	$1,054,046	538,304	1,777,448	$63,321,245	$42,300,000	$14,867,148	$3,500,000	$2,654,097	$63,321
2	1940	61,083,172	220,347	847,709	1,523,527	63,674,755	39,200,000	17,318,370	3,500,000	3,656,385	63,674
3	1941	62,176,407	263,414	856,672	1,269,606	64,566,099	36,600,000	19,920,103	3,500,000	4,545,996	64,566
4	1942	63,429,432	273,314	725,009	1,015,685	65,443,440	33,900,000	22,763,431	3,500,000	5,280,009	65,443
5	1943	64,215,755	215,414	780,870	761,764	65,973,803	30,800,000	25,767,207	3,500,000	5,906,596	65,973
6	1944	64,872,174	287,430	714,626	507,843	66,382,073	27,500,000	28,928,809	3,500,000	6,453,264	66,382
7	1945	65,615,784	299,157	650,703	253,922	66,819,566	24,700,000	32,176,036	3,500,000	6,443,530	66,819
8	1946	66,525,700	246,439	529,741		67,301,880	21,200,000	35,688,010	3,500,000	6,913,870	67,301
9	1947	67,247,761	283,445	575,249		68,106,455	18,000,000	39,531,628	3,500,000	7,074,827	68,106
10	1948	67,817,611	233,092	545,755		68,646,458	14,400,000	43,623,700	3,500,000	7,122,758	68,646
11	1949	68,277,667	320,747	519,362		69,117,776	10,600,000	48,034,555	3,500,000	6,983,221	69,117
12	1950	68,742,765	333,940	501,318		69,578,023	6,600,000	52,714,058	3,500,000	6,763,965	69,578
13	1951	69,079,883	346,212	461,907		69,888,002	2,300,000	57,674,119	3,500,000	6,413,883	69,888
14	1952	69,158,033	2,523,722	436,898		72,118,653		62,943,358	3,500,000	5,675,295	72,118
15	1953	69,177,875	4,906,270	826,754		74,910,899		68,573,581	3,500,000	2,837,318	74,910
16	1954	69,179,314	2,586,145	1,270,646		73,036,105		69,105,182	3,500,000	430,923	73,036
17			3,930,923			3,930,923			3,500,000	430,923	3,930

Source: Ex. 137, Pg. 1, L 21

Data: Col. b: Sch. 5, Col. g; Col. c: Sch. 6b, Col. g; Col. d: Sch. 7b, Col. e; Col. e: Sch. 8, Col. c; Col. f: Col. b+c+d+e; Col. g: Sch. 9b, Col. e; Col. h: Sch. 10b, Col. g; Col. j: Sch. 11d, Col. f; Col. k: Col. g+h+i+j

[illegible] GAS COMPANY OF LOUISIANA

AND

[illegible] NATURAL GAS COMPANY

(Combined Companies)

COMPARATIVE BALANCE SHEETS
BASED ON ADJUSTED ENDING BOOK BALANCES AFTER DEDUCTION OF
$3,000,000 PLANT ADJUSTMENT EFFECTIVE 1/1/40 AND AMORTIZATION OF
CAPITAL ASSETS ON ARBITRARY BASIS JUNE BASIS

Sch 4

Other Def. Current Assets (d)	Bond Discount and Expense (e)	Total Assets (f)	Debt Obligations (g)	Reserves for Amortization of Capital Assets (h)	Capital Stock (i)	Surplus (j)	Total Liabilities and Net Worth (k)
538,304	1,777,448	$63,321,245	$42,300,000	$14,867,148	$3,500,000	$2,654,097	$63,321,245
847,709	1,523,527	63,674,755	39,200,000	17,318,370	3,500,000	3,656,385	63,674,755
856,672	1,269,506	64,566,099	36,600,000	19,920,103	3,500,000	4,545,996	64,566,099
725,009	1,015,685	65,443,440	33,900,000	22,763,431	3,500,000	5,280,009	65,443,440
780,870	761,764	65,973,803	30,800,000	25,767,207	3,500,000	5,906,596	65,973,803
714,626	507,843	66,382,073	27,500,000	28,928,809	3,500,000	6,453,264	66,382,073
650,703	253,922	66,819,566	24,700,000	32,176,036	3,500,000	6,843,530	66,819,566
529,741		67,301,880	21,200,000	35,688,010	3,500,000	6,913,870	67,301,880
575,249		68,106,455	18,000,000	39,531,628	3,500,000	7,074,827	68,106,455
545,755		68,646,458	14,400,000	43,623,700	3,500,000	7,122,758	68,646,458
519,362		69,117,776	10,600,000	48,034,555	3,500,000	6,983,221	69,117,775
501,318		69,578,023	6,600,000	52,714,058	3,500,000	6,763,965	69,578,023
461,907		69,888,002	2,300,000	57,674,119	3,500,000	6,413,883	69,888,002
436,898		72,118,653		62,943,358	3,500,000	5,675,295	72,118,653
826,754		74,910,899		68,573,581	3,500,000	2,837,318	74,910,899
1,270,646		73,036,105		69,105,182	3,500,000	430,923	73,036,105
		3,930,923			3,500,000	430,923	3,930,923

Ex. 137
Pg. 1
L 21

Sch. 7b Col. e	Sch. 8 Col. c	Col. b+c+d+e	Sch. 9b Col. e	Sch. 10b Col. g		Sch. 11d Col. f	Col. g+h+i+j

NATURAL GAS PIPELINE COMPANY OF AMERICA
AND
TEXOMA NATURAL GAS COMPANY

(Combined Companies)

CAPITAL ASSETS

Sch. 5

Line No.	Year (a)	Cost of Additional Property (b)	Capital Expenditure for Replacements (c)	Total Additional Capital Investment (d)	Book Cost of Property Retired (e)	Net Change In Capital Assets (f)	Balance at End of Year (g)
							$59,197,843A
1	1939	$ 856,558	$ 106,530	$ 963,088	$209,484	$ 753,604	59,951,447
2	1940	1,072,270	249,924	1,322,194	190,469	1,131,725	61,083,172
3	1941	926,064	389,053	1,315,117	221,882	1,093,235	62,176,407
4	1942	1,147,407	242,976	1,390,383	137,358	1,253,025	63,429,432
5	1943	620,660	317,879	938,539	152,216	786,323	64,215,755
6	1944	568,531	264,952	833,483	177,064	656,419	64,872,174
7	1945	663,226	380,794	1,044,020	300,410	743,610	65,615,784
8	1946	834,366	333,410	1,167,776	257,860	909,916	66,525,700
9	1947	729,454	144,261	873,715	151,654	722,061	67,247,761
10	1948	562,361	154,689	717,050	147,200	569,850	67,817,611
11	1949	458,461	84,763	543,224	83,168	460,056	68,277,667
12	1950	464,644	89,465	554,109	89,011	465,098	68,742,765
13	1951	338,580	92,890	431,470	94,352	337,118	69,079,883
14	1952	77,543	191,438	268,981	190,831	78,150	69,158,033
15	1953	18,858	55,840	74,698	54,856	19,842	69,177,875
16	1954	—	6,380	6,380	4,941	1,439	69,179,314
17					69,179,314	69,179,314C	—
Source		Ex. 141 Pg. 2, L22	Ex. 141 Pg. 2, L14	Ex. 117 Pg. 1, L3	Ex. 117 Pg. 1, L6		

Data d-e B

*Negative amounts

A - Balance 1/1/39 - from Ex. 137, pg. 1, line 5, column 8
B - Computed by adding amounts in column f to balance at end of previous year
C - per Sch. 21a, L 3

CASH
BASED ON ADMITTED EARNINGS

Sch. 6a

Line No.	Year (a)	Expenditures for Capital Assets (b)	Net Change in Debt Obligations (c)	Dividends (d)	Net Cash from Profits (e)	Net Change in Cash (f)	Balance at End of Year (g)
							$ 163,962 A
1	1939	$ 920,948	$4,500,000	$750,000	$7,061,032	$ 890,084	1,054,046
2	1940	1,307,883	4,600,000	750,000	7,324,184	666,301	1,720,347
3	1941	1,274,902	5,000,000	750,000	7,278,593	249,691	1,970,038
4	1942	1,366,867	5,800,000	750,000	7,532,274	384,593*	1,585,445
5	1943	919,777	5,800,000	750,000	7,631,614	161,837	1,747,282
6	1944	823,117	6,700,000	750,000	7,942,986	330,131*	1,417,151
7	1945	1,027,393	6,700,000	750,000	8,187,552	289,841*	1,127,310
8	1946	1,143,992	7,400,000	750,000	8,343,076	950,916*	176,394
9	1947	852,613	300,000	750,000	8,439,116	6,536,503	6,712,897
10	1948	693,958		750,000	8,298,923	6,854,935	13,567,832
11	1949	522,151		750,000	8,182,958	6,910,807	20,478,639
12	1950	530,975		750,000	8,176,870	6,895,895	27,374,534
13	1951	411,397		750,000	8,156,132	6,994,735	34,369,269
14	1952	149,881		750,000	7,834,919	6,935,038	41,304,307
15	1953	55,849		750,000	5,624,848	4,818,999	46,123,306
16	1954	5,690		750,000	883,614	126,924	46,250,230
17						1,287,632 D	47,537,862
DATA :		Sch.12, Col. d	Sch.9a, Col. d	B	Sch.16a Col. g	Col. e (b+c+d)	C

*) Negative Amount

A - Balance January 1, 1939, Ex. 137, pg. 1, L.7

B - Assumed at 25% of stated value of Capital Stock of Natural Gas Pipeline Company of America outstanding January 1, 1939--see Assumption A attached.

C - Computed by adding amount in column f to balance at end of previous year (column g in line above).

D - Per Sch. 21a, L.2 - $457,452
Sch. 21a, L.5 - 830,180
Total $1,287,632

CASE

BASIS OF ADMITTED EARNINGS AFTER REFLECTING RATE REDUCTION OF $3,000,000 PER YEAR EFFECTIVE 1/1/40

Sch. 6b

Line No.	Year (a)	Expenditures for Capital Assets (b)	Net Change in Debt Obligations (c)	Dividends (d)	Net Cash from Profits (e)	Net Change in Cash (f)	Balance End of Year (g)
							$ 163,962A
1	1939	$ 920,948	$4,500,000	$750,000	$7,061,032	$ 890,084	1,054,046
2	1940	1,307,883	3,100,000	750,000	4,324,184	833,699*	220,347
3	1941	1,278,902	2,600,000	750,000	4,671,969	43,067	263,414
4	1942	1,366,867	2,700,000	750,000	4,826,767	9,900	273,314
5	1943	919,777	3,100,000	750,000	4,711,877	57,900*	215,414
6	1944	823,117	3,300,000	750,000	4,945,133	72,016	287,430
7	1945	1,027,393	3,200,000	750,000	4,989,120	11,727	299,157
8	1946	1,143,992	3,100,000	750,000	4,941,274	52,718*	246,439
9	1947	852,613	3,200,000	750,000	4,839,619	37,006	283,445
10	1948	693,988	3,600,000	750,000	5,043,635	353*	283,092
11	1949	522,151	3,800,000	750,000	5,109,806	37,655	320,747
12	1950	530,975	4,000,000	750,000	5,294,168	13,193	333,940
13	1951	411,397	4,300,000	750,000	5,473,669	12,272	346,212
14	1952	149,881	2,300,000	750,000	5,377,391	2,177,510	2,523,722
15	1953	55,849		750,000	3,188,397	2,382,548	4,906,270
16	1954	6,690		750,000	1,563,435*	2,320,129*	2,586,145
17						1,344,778C	3,930,923

* Negative amounts

Data	Sch. 12 Col. d	Sch. 9b Col. d	D	Sch. 16b Col. f	Col. e-(b+c+d)	E

A - Balance 1/1/39 Ex. 137, Pg. 1, L7

B - See Note B Sch. 6a

C - Per Sch 21b, L2 ------- 457,452
Per Sch 21b, L5 ------- 887,326
Total 1,344,778

D - See Assumption A

E - Computed by adding amount in column f to balance at end of previous year

2754 Natural Gas Pipeline Company of America

And

Texoma Natural Gas Company
(Combined Companies)

Other Net Current Assets
Based on Admitted Earnings Sch. 7a

Net Change in Other Net Current Assets

Line No.	Year (a)	Interest Paid and Accrued (b)	Federal and State Income Tax (c)	Total (d)	Balance End of Year (e)
					$ 524,965A
1	1939	$10,500	$ 2,839	$ 13,339	538,304
2	1940	11,500	219,971*	208,471*	329,833
3	1941	12,500	45,654*	33,154*	296,679
4	1942	14,500	96,433*	81,933*	214,746
5	1943	14,500	41,023*	26,523*	188,223
6	1944	16,750	69,415*	52,665*	135,558
7	1945	16,750	90,803*	74,053*	61,505
8	1946	17,750	66,517*	48,767*	12,738
9	1947	1,500	125,701*	124,201*	111,463*
10	1948		10,630*	10,630*	122,093*
11	1949		4,843*	4,843*	126,936*
12	1950		4,717	4,717	122,219*
13	1951		15,846*	15,846*	138,065*
14	1952		11,414	11,414	126,651*
15	1953		400,454	400,454	273,803
16	1954		939,697	939,697	1,213,500
17				1,213,500*C	
Data		Sch. 20a Col. h	Sch. 17a Col. f	Col b + c	B

*Negative amounts

2755

Natural Gas Pipeline Company of America

And

Texoma Natural Gas Company
(Combined Companies)

Footnotes To

Schedule 7a

A. Balance 1/1/39 from Ex. 137, Pg. 1 as follows:

Line			
		Other Current Assets	
	8	Gas Accounts Receivable	$1,242,878
	9	Gasoline Accounts Receivable	51,567
	10	Miscellaneous Accounts Receivable	5,582
	11	Notes Receivable	25,697
	12	Materials and Supplies	390,749
	13	Gas in Lines	27,906
	14	Interest Receivable	108
	15	Prepaid Expenses	75,767
		Total Other Current Assets	$1,820,254
		Other Current Liabilities	
	24	Wages and Salaries Payable	$ 32,646
	25	Gas Accounts Payable	95,996
	26	Royalties Payable	27,663
	27	Accounts Payable	96,033
	29	Taxes Accrued	926,701
	30	Interest Payable	116,250
		Total Other Current Liabilities	$1,295,289
		Net per above	$ 524,965

B. Computed by adding amount in column d to balance at end of previous year. See Assumption B.

C. Per Sch. 21a, line 6.

2756

Natural Gas Pipeline Company of America
And
Texoma Natural Gas Company
(Combined Companies)

Other Net Current Assets
Based on Admitted Earnings After Reflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40 Sch. 7b

Net Change in Other Net Current Assets

Line No.	Year (a)	Interest Paid and Accrued (b)	Federal and State Income Tax (c)	Total (d)	Balance End of Year (e)
					$ 524,965A
1	1939	$10,500	$ 2,839	$ 13,339	538,304
2	1940	4,000	305,405	309,405	847,709
3	1941	500	8,463	8,963	856,672
4	1942	1,000*	130,663*	131,663*	725,009
5	1943	1,000	54,861	55,861	780,870
6	1944	250*	65,994*	66,244*	714,626
7	1945	750*	63,173*	63,923*	650,703
8	1946	3,750*	117,212*	120,962*	529,741
9	1947	16,000	29,508	45,508	575,249
10	1948	18,000	47,494*	29,494*	545,755
11	1949	19,000	45,393*	26,393*	519,362
12	1950	20,000	38,044*	18,044*	501,318
13	1951	21,500	60,911*	39,411*	461,907
14	1952	11,500	36,509*	25,009*	436,898
15	1953		389,856	389,856	826,754
16	1954		443,892	443,892	1,270,646
17				1,270,646*C	

*Negative amount

Data Sch. 20b Col. h Sch. 17b Col. 1 Col. b+c B

A—See Note A Sch. 7a.
B—Computed by adding amount in column d to balance at end of previous year. See Assumption B.
C—Sch. 21b. L6.

2757

Natural Gas Pipeline Company of America
And
Texoma Natural Gas Company
(Combined Companies)

Bond Discount and Expense — Sch. 8

Line No.	Year (a)	Annual Reduction by Charge Against Earnings (b)	Balance End of Year (c)
			$2,031,369 A
1	1939	$253,921	1,777,448
2	1940	253,921	1,523,527
3	1941	253,921	1,269,606
4	1942	253,921	1,015,685
5	1943	253,921	761,764
6	1944	253,921	507,843
7	1945	253,921	253,922
8	1946	253,922	—
Data:		B	C

A—Balance January 1, 1939 from Exh. 137, pg. 1—L. 18.

B—Even annual installments per Company practice.

C—Computed by deducting amount in column b from balance at end of previous year.

2758 Natural Gas Pipeline Company of America and Texoma Natural Gas Company

(Combined Companies)

Debt Obligations Sch. 9a
Based on Admitted Earnings

Line No.	Year	Bonds Paid Off	Borrowings* or Repayments	Net Change in Debt Obligations	Balance at End of Year
	(a)	(b)	(c)	(d)	(e)
					$ 46,800,000 A
1	1939	$ 4,200,000	$ 300,000	$ 4,500,000	42,300,000
2	1940	4,600,000		4,600,000	37,700,000
3	1941	5,000,000		5,000,000	32,700,000
4	1942	5,800,000		5,800,000	26,900,000
5	1943	5,800,000		5,800,000	21,100,000
6	1944	6,700,000		6,700,000	14,400,000
7	1945	6,700,000		6,700,000	7,700,000
8	1946	7,700,000	300,000*	7,400,000	300,000
9	1947		300,000	300,000	—
Data:		Sch. 15, Col. c.	Sch. 19a, Col. c	Col. b+c	B

(*) Negative amount.

A—Balance January 1, 1939, from Ex. 137, pg. 1, L. 22, Bonds Outstanding ..... $ 46,500,000
and Ex. 137, pg. 1, L. 28—Notes Payable Per above.... 300,000
$ 46,800,000

B—Computed by deducting amount in column d from balance at end of previous year.

2759 **Natural Gas Pipeline Company of America and Texoma Natural Gas Company**

(Combined Companies)

Debt Obligations **Sch. 9b**

Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 per Year Effective 1/1/40

Line No.	Year	Bonds Paid Off	Borrowings* or Repayments	Net Change in Debt Obligations	Balance End of Year
	(a)	(b)	(c)	(d)	(e)
					$ 46,800,000 A
1	1939	$ 4,200,000	$ 300,000	$ 4,500,000	42,300,000
2	1940	4,600,000	1,500,000*	3,100,000	39,200,000
3	1941	5,000,000	2,400,000*	2,600,000	36,600,000
4	1942	5,800,000	3,100,000*	2,700,000	33,900,000
5	1943	5,800,000	2,700,000*	3,100,000	30,800,000
6	1944	6,700,000	3,400,000*	3,300,000	27,500,000
7	1945	6,700,000	3,500,000*	3,200,000	24,300,000
8	1946	7,700,000	4,600,000*	3,100,000	21,200,000
9	1947		3,200,000	3,200,000	18,000,000
10	1948		3,600,000	3,600,000	14,400,000
11	1949		3,800,000	3,800,000	10,600,000
12	1950		4,000,000	4,000,000	6,600,000
13	1951		4,300,000	4,300,000	2,300,000
14	1952		2,300,000	2,300,000	—
15	1953				—
16	1954				—
Data:		Sch. 15, Col. c	Sch. 19b; Col. c	Col. b+c	B

A—See Note A, Sch. 9a.

B—Computed by subtracting amount in column d from Balance at end of previous year.

(*) Negative amounts.

2760

Natural Gas Pipeline Company of America
And
Texoma Natural Gas Company
(Combined Companies)

Reserves for Amortization of Property — Sch. 10a
Arbitrary Straight Line Basis

Line No.	Year	Accrual for Year	Net Cost of Retirements	Net Change In Reserve	Balance at End of Year
	(a)	(b)	(c)	(d)	(e)
					$ 12,557,892 A
1	1939	$ 3,800,000	$ 167,344	$ 3,632,656	16,190,548
2	1940	3,800,000	176,158	3,623,842	19,814,390
3	1941	3,800,000	185,667	3,614,333	23,428,723
4	1942	3,800,000	113,842	3,686,158	27,114,881
5	1943	3,800,000	133,454	3,666,546	30,781,427
6	1944	3,800,000	166,698	3,633,302	34,414,729
7	1945	3,800,000	283,783	3,516,217	37,930,946
8	1946	3,800,000	234,076	3,565,924	41,496,870
9	1947	3,800,000	130,552	3,669,448	45,166,318
10	1948	3,800,000	124,138	3,675,862	48,842,180
11	1949	3,800,000	62,095	3,737,905	52,580,085
12	1950	3,800,000	65,877	3,734,123	56,314,208
13	1951	3,800,000	74,279	3,725,721	60,039,929
14	1952	3,800,000	71,731	3,728,269	63,768,198
15	1953	3,800,000	36,007	3,763,993	67,532,191
16	1954	1,578,242	5,251	1,572,991	69,105,182
17			69,105,182 C	69,105,182	—

Data: B Sch. 13—Col. f

A—Balance January 1, 1939, from Ex. 137, pg. 1, L. 36, col. 8.

B—No determination of straight line depreciation or amortization has been made to verify the reasonableness of the annual increment of amortization used for this purpose. The amount used is arbitrary being based on a rounded out figure for 15 years, leaving an odd-amount for the 16th year, but the amounts will provide a reserve sufficient to amortize the claimed investment in the property plus working capital less salvage

C—Par Sch. 21a, L. 1—$68,721,862
Par Sch. 21a, L. 4— 383,320
Total $69,105,182

2761 Natural Gas Pipeline Company of America and Texoma Natural Gas Company

(Combined Companies)

Reserves for Amortization of Property
Arbitrary Sinking Fund Basis

Line No.	Year	Accrual for Year: Sinking Fund Payment	Accrual for Year: Interest on Sinking Fund	Total	Net Cost of Retirements	Net Change in Reserve	Bala End of
	(a)	(b)	(c)	(d)	(e)	(f)	(
							$12,55
	1939	$ 2,440,000	$ 36,600	$ 2,476,600	$ 167,344	$ 2,309,256	14,8
2	1940	2,440,000	187,380	2,627,380	176,158	2,451,222	17,3
3	1941	2,440,000	347,400	2,787,400	185,667	2,601,733	19,9
4	1942	2,440,000	517,170	2,957,170	113,842	2,843,328	22,7
5	1943	2,440,000	697,230	3,137,230	133,454	3,003,776	25,7
6	1944	2,440,000	888,300	3,328,300	166,698	3,161,602	28,9
7	1945	2,440,000	1,091,010	3,531,010	283,783	3,247,227	32,1
8	1946	2,440,000	1,306,050	3,746,050	234,076	3,511,974	35,6
9	1947	2,440,000	1,534,170	3,974,170	130,552	3,843,618	39,5
10	1948	2,440,000	1,776,210	4,216,210	124,138	4,092,072	43,6
11	1949	2,440,000	2,032,950	4,472,950	62,095	4,410,855	48,0
12	1950	2,440,000	2,305,380	4,745,380	65,877	4,679,503	52,7
13	1951	2,440,000	2,594,340	5,034,340	74,279	4,960,061	57,6
14	1952	2,440,000	2,900,970	5,340,970	71,731	5,269,239	62,9
15	1953	2,440,000	3,226,230	5,666,230	36,007	5,630,223	68,5
16	1954	536,852	—	536,852	5,251	531,601	69,1
17					69,105,182D	69,205,182*	
Data:		B	C	Col. b+e	Sch. 13, Col. f	Col. d—e	

(*) Negative amounts.

A—Balance January 1, 1939, from Ex. 137, pg. 1, L. 36, col.18.

B—Arbitrary annual sinking fund payment.

C—6% interest on balance in Reserve Fund for year, plus 6% interest on one-half of payment to Reserve Fund for one-half year assuming sinking fund payments a in semi-annual installments on June 30 and December 31. All interest is comp even multiples of $1000, assuming minor additional amounts are not bearing i

D—Per Sch. 21, L. 1—$68,721,862
Sch. 21, L, 4— 383,320

Total $69,105,182

E—Computed by adding amounts in Column f to Balance at end of previous year.

2762 Natural Gas Pipeline Company of America Sch. 11a

And

Texoma Natural Gas Company

(Combined Companies)

Surplus

Based on Admitted Earnings and Amortization of Capital Assets on Arbitrary Straight Line Basis

Line No.	Year	Net Profits from Earnings	Dividends	Net Change in Surplus	Balance at End of Year
	(a)	(b)	(c)	(d)	(e)
1	1939	$3,020,450	$750,000	$2,270,450	$ 939,753*A
2	1940	3,061,792	750,000	2,311,792	1,330,697
3	1941	3,191,518	750,000	2,441,518	3,642,489
4	1942	3,396,420	750,000	2,646,420	6,084,007
5	1943	3,551,170	750,000	2,801,170	8,730,427
6	1944	3,836,400	750,000	3,086,400	11,531,597
7	1945	4,059,578	750,000	3,309,578	14,617,997
8	1946	4,240,387	750,000	3,490,387	17,927,575
9	1947	4,514,915	750,000	3,764,915	21,417,962
10	1948	4,488,293	750,000	3,738,293	25,182,877
11	1949	4,378,115	750,000	3,628,115	28,921,170
12	1950	4,381,587	750,000	3,631,587	32,549,285
13	1951	4,340,286	750,000	3,590,286	36,180,872
14	1952	4,046,333	750,000	3,296,333	39,771,158
15	1953	2,225,302	750,000	1,475,302	43,067,491
16	1954	245,069	750,000	504,931*	44,542,793
17					44,037,862
					44,037,862
Data		Sch. 18a Col. g	Sch. 6a Col. d	Col. b–c	B

A—Balance as at 1/1/39 from Ex. 137, Pg. 1, L 37.

B—Computed by adding amount in column d to balance at end of previous year.

2763 Natural Gas Pipeline Company of America Sch. 1
And
Texoma Natural Gas Company
(Combined Companies)
Surplus
Based on Admitted Earnings and Amortization of Capital Assets on Arbitrary Sinking Fund Basis

Line No.	Year	Net Change in Surplus on Arbitrary Straight Line Basis	Annual Accrual on Straight Line Amortization	Annual Accrual on Sinking Fund Amortization	Net Change in Surplus on Arbitrary Sinking Fund Amortization	Balance End of Year
	(a)	(b)	(c)	(d)	(e)	(f)
						$ 939,753
1	1939	$ 2,270,450	$ 3,800,000	$ 2,476,600	$ 3,593,850	2,654,097
2	1940	2,311,792	3,800,000	2,627,380	3,484,412	6,138,509
3	1941	2,441,518	3,800,000	2,787,400	3,454,118	9,592,627
4	1942	2,646,420	3,800,000	2,957,170	3,489,250	13,081,877
5	1943	2,801,170	3,800,000	3,137,230	3,463,940	16,545,817
6	1944	3,086,400	3,800,000	3,328,300	3,558,100	20,103,917
7	1945	3,309,578	3,800,000	3,531,010	3,578,568	23,682,485
8	1946	3,490,387	3,800,000	3,746,050	3,544,337	27,226,822
9	1947	3,764,915	3,800,000	3,974,170	3,590,745	30,817,567
10	1948	3,738,293	3,800,000	4,216,210	3,322,083	34,139,650
11	1949	3,628,115	3,800,000	4,472,950	2,955,165	37,094,815
12	1950	3,631,587	3,800,000	4,745,380	2,686,207	39,781,022
13	1951	3,599,286	3,800,000	5,034,340	2,355,946	42,136,968
14	1952	3,296,333	3,800,000	5,340,970	1,755,363	43,892,331
15	1953	1,475,302	3,800,000	5,666,230	390,928*	43,501,403
16	1954	504,931*	1,578,242	536,852	536,459	44,037,862
17.						44,037,862
Data:		Sch. 11a, Col. d	Sch. 10a, Col. b	Sch. 10b, Col. d	Col. b+c-d	B

A—Balance January 1, 1939, from Ex. 137, pg. 1, L. 37.

B—Computed by adding amount in column e to balance at end of previous year.

(*) Negative amounts.

2764 Natural Gas Pipeline Company of America Sch. 11c
And
Texoma Natural Gas Company
(Combined Companies)

Surplus

Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 Per Year Effective 1/1/40 and Amortization of Capital Assets on Arbitrary Straight Line Basis

Line No.	Year	Net Profits from Earnings	Dividends	Net Change in Surplus	Balance at End of Year
	(a)	(b)	(c)	(d)	(e)
1	1939	$3,020,450	$750,000	$2,270,450	$ 939,753*A
2	1940	579,668	750,000	170,332*	1,330,697
3	1941	627,011	750,000	122,989*	1,160,365
4	1942	641,183	750,000	108,817*	1,037,376
5	1943	713,817	750,000	36,183*	928,559
6	1944	824,968	750,000	74,968	892,376
7	1945	871,276	750,000	121,276	967,344
8	1946	766,390	750,000	16,390	1,088,620
9	1947	1,085,127	750,000	335,127	1,105,010
10	1948	1,214,141	750,000	464,141	1,440,137
11	1949	1,283,413	750,000	533,413	1,904,278
12	1950	1,476,124	750,000	726,124	2,437,691
13	1951	1,634,258	750,000	884,258	3,163,815
14	1952	1,552,382	750,000	802,382	4,048,073
15	1953	221,747*	750,000	971,747*	4,850,455
16	1954	2,697,785*	750,000	3,447,785*	3,878,708
17					430,923
					430,923
DATA:		Sch. 18b Col. h	C	Col. b-c	B

A—Balance January 1, 1939 from Ex. 137, Pg. 1, L. 37.

B—Computed by adding amount in column e to balance at end of previous year.

C—See Assumption A.

(*) Negative amounts.

2765 Natural Gas Pipeline Company of America Sch. i

And

Texoma Natural Gas Company

(Combined Companies)

Surplus

Based on Admitted Earnings After Reflecting Rate Reduction of $3,000,000 Per Year Effective 1/1/40 and Amortization of Capital Assets on Arbitrary Sinking Fund Basis

Line No.	Year	Net Change in Surplus on Arbitrary Straight Line Basis	Annual Accrual on Straight Line Amortization	Annual Accrual on Sinking Fund Amortization	Net Change in Surplus on Arbitrary Sinking Fund Amortization	Balance End of Year
	(a)	(b)	(c)	(d)	(e)	(f)
						$ 939,753
1	1939	$ 2,270,450	$ 3,800,000	$ 2,476,600	$ 3,593,850	2,654,097
2	1940	170,332*	3,800,000	2,627,380	1,002,288	3,656,385
3	1941	122,989*	3,800,000	2,787,400	889,611	4,545,996
4	1942	108,817*	3,800,000	2,957,170	734,013	5,280,009
5	1943	36,183*	3,800,000	3,137,230	626,587	5,906,596
6	1944	74,968	3,800,000	3,328,300	546,668	6,453,264
7	1945	121,276	3,800,000	3,531,010	390,266	6,843,530
8	1946	16,390	3,800,000	3,746,050	70,340	6,913,870
9	1947	335,127	3,800,000	3,974,170	160,957	7,074,827
10	1948	464,141	3,800,000	4,216,210	47,931	7,122,758
11	1949	533,413	3,800,000	4,472,950	139,537*	6,983,221
12	1950	726,124	3,800,000	4,745,380	219,256*	6,763,965
13	1951	884,258	3,800,000	5,034,340	350,082*	6,413,883
14	1952	802,382	3,800,000	5,340,970	738,588*	5,675,295
15	1953	971,747*	3,800,000	5,666,230	2,837,977*	2,837,318
16	1954	3,447,785*	1,578,242	536,852	2,406,395*	430,923
17						430,923

* Negative amounts

Data	Sch. 11c Col. d	Sch. 10a Col. b	Sch. 10b Col. d	Col. b+c-d	B

A—Balance 1/1/39 from Ex. 137, Pg. 1, L37

B—Computed by adding amount in column e to balance at end of previous year.

2766 Natural Gas Pipeline Company of America Sch. 12
And
Texoma Natural Gas Company
(Combined Companies)
Expenditures for Capital Assets

Line No.	Year	Total Additional Capital Investment	Net of Salvage Over Removal Cost	Expenditures for Capital Assets
	(a)	(b)	(c)	(d)
1	1939	$ 963,088	$42,140	$ 920,948
2	1940	1,322,194	14,311	1,307,883
3	1941	1,315,117	36,215	1,278,902
4	1942	1,390,383	23,516	1,366,867
5	1943	938,539	28,762	919,777
6	1944	833,483	10,366	823,117
7	1945	1,044,020	16,627	1,027,393
8	1946	1,167,776	23,784	1,143,992
9	1947	873,715	21,102	852,613
10	1948	717,050	23,062	693,988
11	1949	543,224	21,073	522,151
12	1950	554,10[illegible]	23,134	530,975
13	1951	431,470	20,072	411,397
14	1952	268,981	119,100	149,881
15	1953	74,698	18,849	55,849
16	1954	6,380	310*	6,690
Data:		Sch. 5—Col. d	Sch. 13—Col. d	Col. b-c

(*) Negative amount.

Exhibit No. 188.

2767

Natural Gas Pipeline Company of America
And
Texoma Natural Gas Company
(Combined Companies)
Net Cost of Retirements

Sch. 13

Line No.	Year	Salvage Value of Retirements	Cost of Retiring Capital Replaced	Net of Salvage Over Removal Cost	Book Cost of Property Retired	Net Cost of Retirements
	(a)	(b)	(c)	(d)	(e)	(f)
1	1939	$50,832	$ 8,692	$42,140	$209,484	$167,344
2	1940	22,479	8,168	14,311	190,469	176,158
3	1941	53,903	17,688	36,215	221,882	185,667
4	1942	41,742	18,226	23,516	137,358	113,842
5	1943	32,178	13,416	18,762	152,216	133,454
6	1944	19,360	8,994	10,366	177,064	166,698
7	1945	31,073	14,446	16,627	300,410	283,783
8	1946	29,630	5,846	23,784	257,860	234,076
9	1947	23,359	2,257	21,102	151,654	130,552
10	1948	24,858	1,796	23,062	147,200	124,138
11	1949	21,707	634	21,073	83,168	62,095
12	1950	23,970	836	23,134	89,011	65,877
13	1951	21,250	1,177	20,073	94,352	74,279
14	1952	124,067	4,967	119,100	190,831	71,731
15	1953	19,891	1,042	18,849	54,856	36,007
16	1954	954	1,264	310*	4,941	5,251
SOURCE:		Ex. 141—Pg. 2-L. 16	Ex. 141—Pg. 2-L. 15		Ex. 117—Pg. 1-L. 6	
DATA:				Col. b–c		Col. e–d

(*) Negative amount.

2768 Natural Gas Pipeline Company of America Sch. 14
And
Texoma Natural Gas Company
(Combined Companies)

Computation of Annual Accrual
on Arbitrary Sinking Fund Basis

Line No.	Period	Semi-Annual Amortization	Interest at 6%	Total Semi-Annual Addition to Amortization Fund	Annual Amortization
	(a)	(b)	(c)	(d)	(e)
1	1	$1,220,000	—	$1,220,000	
2	2	1,220,000	$ 36,600	1,256,600	$2,476,600
3	3	1,220,000	74,280	1,294,280	
4	4	1,220,000	113,100	1,333,100	2,627,380
5	5	1,220,000	153,090	1,373,090	
6	6	1,220,000	194,310	1,414,310	2,787,400
7	7	1,220,000	236,730	1,456,730	
8	8	1,220,000	280,440	1,500,440	2,957,170
9	9	1,220,000	325,440	1,545,440	
10	10	1,220,000	371,790	1,591,790	3,137,230
11	11	1,220,000	419,550	1,639,550	
12	12	1,220,000	468,750	1,688,750	3,328,300
13	13	1,220,000	519,420	1,739,420	
14	14	1,220,000	571,590	1,791,590	3,531,010
15	15	1,220,000	625,350	1,845,350	
16	16	1,220,000	680,700	1,900,700	3,746,050
17	17	1,220,000	737,730	1,957,730	
18	18	1,220,000	796,440	2,016,440	3,974,170
19	19	1,220,000	856,950	2,076,950	
20	20	1,220,000	919,260	2,139,260	4,216,210
21	21	1,220,000	983,430	2,203,430	
22	22	1,220,000	1,049,520	2,269,520	4,472,950
23	23	1,220,000	1,117,620	2,337,620	
24	24	1,220,000	1,187,760	2,407,760	4,745,380
25	25	1,220,000	1,259,970	2,479,970	
26	26	1,220,000	1,334,370	2,554,370	5,034,340
27	27	1,220,000	1,411,020	2,631,020	
28	28	1,220,000	1,489,950	2,709,950	5,340,970
29	29	1,220,000	1,571,250	2,791,250	
30	30	1,220,000	1,654,980	2,874,980	5,666,230
		A	B	C	D

(A) Arbitrary amount.

(B) Interest on even thousand dollar accumulations at beginning of period at 6% per annum.

(C) Col. b + c.

(D) Addition of two items in col. d.

NATURAL GAS PIPELINE COMPANY OF AMERICA
AND
TEXOMA NATURAL GAS COMPANY

(Combined Companies)

BONDS AND INTEREST ON BONDS

Sch. 15

Line No.	Dates (a)	Bonds Outstanding at Beginning of Year (b)	Payments per Sinking Fund Requirements (c)	Balance After Repayments (d)	Interest Accrued (e)	Interest Paid (f)	Net Decrease in Current Liabilities (g)
1	1/1/39 to 6/15/39	$46,500,000A		$46,500,000	$1,278,750		
2	6/15/39		$2,100,000			$1,395,000	
3	6/15/39 to 12/15/39			44,400,000	1,332,000		
4	12/15/39		2,100,000			1,332,000	
5	12/15/39 to 12/31/39			42,300,000	105,750		
6	1939		4,200,000		2,716,500	2,727,000	$10,500
7	1/1/40 to 6/15/40	42,300,000		42,300,000	1,163,250		
8	6/15/40		2,300,000			1,269,000	
9	6/15/40 to 12/15/40			40,000,000	1,200,000		
10	12/15/40		2,300,000			1,200,000	
11	12/15/40 to 12/31/40			37,700,000	94,250		
12	1940		4,600,000		2,457,500	2,469,000	11,500
13	1/1/41 to 6/15/41	37,700,000		37,700,000	1,036,750		
14	6/15/41		2,500,000			1,131,000	
15	6/15/41 to 12/15/41			35,200,000	1,056,000		
16	12/15/41		2,500,000			1,056,000	
17	12/15/41 to 12/31/41			32,700,000	81,750		
18	1941		5,000,000		2,174,500	2,187,000	12,500
19	1/1/42 to 6/15/42	32,700,000		32,700,000	899,250		
20	6/15/42		2,900,000			981,000	
21	6/15/42 to 12/15/42			29,800,000	894,000		
22	12/15/42		2,900,000			894,000	
23	12/15/42 to 12/31/42			26,900,000	67,250		
24	1942		5,800,000		1,860,500	1,875,000	14,500
25	1/1/43 to 6/15/43	26,900,000		26,900,000	739,750		
26	6/15/43		2,900,000			807,000	
27	6/15/43 to 12/15/43			24,000,000	720,000		
28	12/15/43		2,900,000			720,000	
29	12/15/43 to 12/31/43			21,100,000	52,750		
30	1943		5,800,000		1,512,500	1,527,000	14,500
31	1/1/44 to 6/15/44	21,100,000		21,100,000	580,250		
32	6/15/44		3,350,000			633,000	
33	6/15/44 to 12/15/44			17,750,000	532,500		
34	12/15/44		3,350,000			532,500	
35	12/15/44 to 12/31/44			14,400,000	36,000		
36	1944		6,700,000		1,148,750	1,165,500	16,750

2770

NATURAL GAS PIPELINE COMPANY OF AMERICA
AND
TEXOMA NATURAL GAS COMPANY

(Combined Companies)

BONDS AND INTEREST ON BONDS

Sch. 15 (Cont'd.)

Line No.	Dates (a)	Bonds Outstanding at Beginning of Year (b)	Payments per Sinking Fund Requirements (c)	Balance After Repayments (d)	Interest Accrued (e)	Interest Paid (f)	Net Decrease in Current Liabilities (g)
37	1/1/45 to 6/15/45	$14,400,000		$14,400,000	$396,000		
38	6/15/45		$3,350,000	11,050,000		$432,000	
39	6/15/45 to 12/15/45				331,500		
40	12/15/45		3,350,000	7,700,000		331,500	
41	12/15/45 to 12/31/45				19,250		
42	1945		6,700,000		746,750	763,500	$16,750
43	1/1/46 to 6/15/46	7,700,000		7,700,000	211,750		
44	6/15/46		3,350,000	4,350,000		231,000	
45	6/15/46 to 12/15/46				130,500		
46	12/15/46		4,350,000			130,500	
47	1946		7,700,000		342,250	361,500	19,250
		B	C	Computed	D	E	Col. f-e

A - Balance 1/1/39 per Ex. 137, Pg. 1, L22
B - Computed per last figure for previous year
C - Based on requirements in Company's mortgage indenture
D - 6% interest on amount in column d for period noted in column a
E - Payment computed to be due on date noted

2771

Natural Gas Pipeline Company of America
And
Texoma Natural Gas Company
(Combined Companies)

Sch. 16a

Net Cash from Profits
Based on Admitted Earnings

Line No.	Year	Revenue Remaining for Replacements Amortization and Return	Federal and State Income Tax Accrued	Earnings Before Federal and State Income Tax	Payments: Federal and State Income Tax Paid	Payments: Interest Paid	Net Cash from Profits
		(a)	(b)	(c)	(d)	e	(f)	(g)
1	1939	$9,799,871	$ 626,592	$10,426,463	$ 629,431	$2,736,000	$7,061,032
2	1940	9,573,213	846,563	10,419,776	626,592	2,469,000	7,324,184
3	1941	9,419,939	892,217	10,312,156	846,563	2,187,000	7,278,593
4	1942	9,310,841	988,650	10,299,491	892,217	1,875,000	7,532,274
5	1943	9,117,591	1,029,673	10,147,264	988,650	1,527,000	7,631,614
6	1944	9,039,071	1,099,088	10,138,159	1,029,673	1,165,500	7,942,986
7	1945	8,860,249	1,189,891	10,050,140	1,099,088	763,500	8,187,552
8	1946	8,638,059	1,256,408	9,894,467	1,189,891	361,500	8,343,076
9	1947	8,322,415	1,382,109	9,704,524	1,256,408	9,000	8,439,116
10	1948	8,288,293	1,392,739	9,681,032	1,382,109		8,298,923
11	1949	8,178,115	1,397,582	9,575,697	1,392,739		8,182,958
12	1950	8,181,587	1,392,865	9,574,452	1,397,582		8,176,870
13	1951	8,140,286	1,408,711	9,548,997	1,392,865		8,156,132
14	1952	7,846,333	1,397,297	9,243,630	1,408,711		7,834,919
15	1953	6,025,302	996,843	7,022,145	1,397,297		5,624,848
16	1954	1,823,311	57,146	1,880,457	996,843		883,614

Source: Ex. 141 Pg. 2 L. 13

Data: Sch. 17a Col. d | Col. b+c | Sch. 17a Col. e | Sch. 20a Col. d | Col. d-(e+f)

2772 Natural Gas Pipeline Company of America Sch. 16
And
Texoma Natural Gas Company
(Combined Companies)
Net Cash from Profits
Based on Admitted Earnings after Reflecting Rate Reduction
of $5,000,000 Per Year Effective 1/1/40

Line No.	Year	Earnings before Federal and State Income Tax	Rate Reduction	Federal and State Income Tax Paid	Interest Paid	Net Cash from Profits
	(a)	(b)	(c)	(d)	(e)	(f)
1	1939	$10,426,463		$629,431	$2,736,000	$7,061,032
2	1940	10,419,776	$3,000,000	626,592	2,469,000	4,324,184
3	1941	10,312,156	3,000,000	321,187	2,319,000	4,671,969
4	1942	10,299,491	3,000,000	312,724	2,160,000	4,826,767
5	1943	10,147,264	3,000,000	443,387	1,992,000	4,711,877
6	1944	10,138,159	3,000,000	388,526	1,804,500	4,945,133
7	1945	10,050,140	3,000,000	454,520	1,606,500	4,989,120
8	1946	9,894,467	3,000,000	517,693	1,435,500	4,941,274
9	1947	9,704,524	3,000,000	634,905	1,230,000	4,839,619
10	1948	9,681,032	3,000,000	605,397	1,032,000	5,043,635
11	1949	9,575,697	3,000,000	652,891	813,000	5,109,806
12	1950	9,574,452	3,000,000	698,284	582,000	5,294,168
13	1951	9,548,997	3,000,000	736,328	339,000	5,473,669
14	1952	9,243,630	3,000,000	797,239	69,000	5,377,391
15	1953	7,022,145	3,000,000	833,748		3,188,397
16	1954	1,880,457	3,000,000	443,892		1,563,435

(*) Negative amounts.

Data:	Sch. 16a Col. d	A	Sch. 17b Col. k	Sch. 20b Col. d	Col. b-(c+d+

A—Assumed rate reduction.

2773 Natural Gas Pipeline Company of America Sch. 17a
And
Texoma Natural Gas Company
(Combined Companies)

Federal and State Income Tax
Based on Admitted Earnings

Line No.	Year	Claimed Income Tax Accrued: Natural Gas Pipeline Company of America	Claimed Income Tax Accrued: Texoma Natural Gas Company	Claimed Income Tax Accrued: Total	Paid	Net Change in Other Net Current Assets
	(a)	(b)	(c)	(d)	(e)	(f)
1	1939	$ 626,592	$	$ 626,592	$ 629,431	$ 2,839
2	1940	525,376	321,187	846,563	626,592	219,971*
3	1941	589,456	302,761	892,217	846,563	45,654*
4	1942	545,263	443,387	988,650	892,217	96,433*
5	1943	651,512	378,161	1,029,673	988,650	41,023*
6	1944	644,568	454,520	1,099,088	1,029,673	69,415*
7	1945	672,198	517,693	1,189,891	1,099,088	90,803*
8	1946	621,503	634,905	1,256,408	1,189,891	66,517*
9	1947	1,382,109		1,382,109	1,256,408	125,701*
10	1948	1,392,739		1,392,739	1,382,109	10,630*
11	1949	1,397,582		1,397,582	1,392,739	4,843*
12	1950	1,392,865		1,392,865	1,397,582	4,717
13	1951	1,408,711		1,408,711	1,392,865	15,846*
14	1952	1,397,297		1,397,297	1,408,711	11,414
15	1953	996,843		996,843	1,397,297	400,454
16	1954	57,146		57,146	996,843	939,697
Source:		Ex. 116 Pg. 4, L 10	Ex. 116 Pg. 3, L 9			
Data				Col. b+c	A	Col d-e

1—Payment of previous years accrual.

FEDERAL AND STATE INCOME TAX
BASED ON ADJUSTED EARNINGS AFTER EFFECTIVE RATE REDUCTION OF
$3,000,000 PER YEAR EFFECTIVE 1/1/40

Sch. 17

NATURAL GAS PIPELINE COMPANY OF AMERICA

Line No.	Year (a)	Change in Taxable Net Income: Rate Reduction (b)	Interest Accrual: Revised (c)	Interest Accrual: Per Company (d)	Reduction in Taxable Net Income (b)	Reduction in Federal Income Tax (f)		Claimed Federal Income Tax (g)	Revised Federal Income Tax (h)	Texoma Natural Gas Company Claimed Federal and State Income Tax (i)	Total Accrued (j)	Paid (k)	Net Change in Other Net Current Assets (l)
1	1939		$2,725,500	$2,716,500	$ 9,000	$ —	B	$ 626,392	$626,592	$ —	$626,592	$629,431	$ 2,839
2	1940	$3,000,000	2,465,000	2,457,500	3,007,500	525,376	C	525,376	...	321,187	321,187	626,592	305,405
3	1941	3,000,000	2,318,500	2,174,500	3,144,000	579,493	D	589,456	9,963	302,761	312,724	321,187	8,463
4	1942	3,000,000	2,161,000	1,800,500	3,300,500	545,263	C	545,263	--	443,387	443,387	312,724	130,663*
5	1943	3,000,000	1,991,000	1,512,500	3,478,500	641,147	D	651,512	10,365	378,161	388,526	443,387	54,861
6	1944	3,000,000	1,804,750	1,148,750	3,656,000	644,568	C	644,568	--	454,520	454,520	388,526	65,994*
7	1945	3,000,000	1,607,250	796,750	3,850,500	672,198	C	672,198	--	517,693	517,693	454,520	63,173*
8	1946	3,000,000	1,439,250	342,250	4,097,000	621,503	C	621,503	...	634,905	634,905	517,693	117,212*
9	1947	3,000,000	1,214,000		4,214,000	776,712	D	1,362,109	605,397		605,397	634,905	29,508
10	1948	3,000,000	1,014,000		4,014,000	739,848	D	1,392,739	652,891		652,891	605,397	47,494*
11	1949	3,000,000	794,000		3,794,000	698,298	D	1,397,582	698,284		698,284	652,891	45,393*
12	1950	3,000,000	562,000		3,562,000	656,537	D	1,392,865	736,328		736,328	698,284	38,044*
13	1951	3,000,000	317,500		3,317,500	611,472	D	1,408,711	797,239		797,239	736,328	60,911*
14	1952	3,000,000	57,500		3,057,500	563,549	D	1,397,297	833,748		833,748	797,239	36,509*
15	1953	3,000,000			3,000,000	552,951	D	996,843	443,892		443,892	833,748	389,856
16	1954	3,000,000			3,000,000	57,146	C	57,146	--		--	443,892	443,892

SOURCE:

Ex. 116
Pg. 4,
L. 15

Ex. 116.
Pg. 3.
L. 9

DATA: A — Sch. 20, Col. g; Sch. 15, Col. e — D — Col. g of — Col. h-i — B — Col. h-j

A -- Assumed rate reduction

B No change made for minor adjustment

C No tax payable.

D -- 18.451% of column c (the rate at which the Claimed Federal Income Tax is accrued)

E Payment of previous year's accrual

(*) Negative amounts.

775 Natural Gas Pipeline Company of America Sch. 18a
And
Texoma Natural Gas Company
(Combined Companies)

Net Profits from Earnings
Based on Admitted Earnings and on Amortization of Capital Assets
on Arbitrary Straight Line Basis

Line No.	Year	Revenues Remaining for Replacements, Amortization and Return	Income Deductions				Net Profits from Earnings
			Interest Accrued	Amortization of Debt Discount	Amortization of Capital Assets	Total Income Deductions	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	1939	$9,799,871	$2,275,500	$253,921	$3,800,000	$6,779,421	$3,020,450
2	1940	9,573,213	2,457,500	253,921	3,800,000	6,511,421	3,061,792
3	1941	9,419,939	2,174,500	253,921	3,800,000	6,228,421	3,191,518
4	1942	9,310,841	1,860,500	253,921	3,800,000	5,914,421	3,396,420
5	1943	9,117,591	1,512,501	253,921	3,800,000	5,566,421	3,551,170
6	1944	9,039,071	1,148,750	253,921	3,800,000	5,202,671	3,836,400
7	1945	8,860,249	746,750	253,921	3,800,000	4,800,671	4,059,578
8	1946	8,638,059	343,750	253,922	3,800,000	4,397,672	4,240,387
9	1947	8,322,415	7,500		3,800,000	3,807,500	4,514,915
10	1948	8,288,293			3,800,000	3,800,000	4,488,293
11	1949	8,178,115			3,800,000	3,800,000	4,378,115
12	1950	8,181,587			3,800,000	3,800,000	4,381,587
13	1951	8,140,286			3,800,000	3,800,000	4,340,286
14	1952	7,846,333			3,800,000	3,800,000	4,046,333
15	1953	6,025,302			3,800,000	3,800,000	2,225,302
16	1954	1,823,311			1,578,242	1,578,242	245,069
SOURCE:		Ex. 141, pg. 2, L. 13					
DATA:			Sch. 20a, Col. g	Sch. 8, Col. b	Sch. 10a, Col. b	Col. c+d+e	Col. b-f

NATURAL GAS PIPELINE COMPANY OF AMERICA
AND
TEXOMA NATURAL GAS COMPANY

(Combined Companies)

Sch. 13b

NET PROFITS FROM EARNINGS
BASED ON ARBITRED EARNINGS AFTER REFLECTING RATE REDUCTION OF $3,000,000 PER YEAR EFFECTIVE 1/1/40 AND ON AMORTIZATION OF CAPITAL ASSETS ON ARBITRARY STRAIGHT LINE BASIS

Line No.	Year (a)	Earnings Before Federal and State Income Tax (b)	Rate Reduction (c)	Federal and State Income Tax Accrued (d)	Interest Accrued (e)	Amortization of Debt Discount (f)	Amortization of Capital Assets (g)	Net Profits from Earnings (h)
1	1939	$ 10,426,463	$	$ 626,592	$ 2,725,500	$ 253,921	$ 3,800,000	$ 3,020,450
2	1940	10,419,776	3,000,000	321,167	2,[illegible]	253,921	3,800,000	[illegible]
3	1941	10,312,156	3,000,000	312,724	2,316,500	253,921	3,800,000	627,011
4	1942	10,298,492	3,000,000	443,367	2,[illegible]	253,921	3,800,000	041,183
5	1943	10,147,264	3,000,000	388,526	1,991,000	253,921	3,800,000	713,817
6	1944	10,138,159	3,000,000	454,520	1,804,[illegible]	253,921	3,800,000	824,968
7	1945	10,050,140	3,000,000	547,653	2,[illegible]	253,921	3,800,000	871,276
8	1946	9,894,467	3,000,000	634,905	1,475,250	253,922	3,800,000	780,390
9	1947	9,704,524	3,000,000	605,397	1,21[illegible]	—	3,800,000	1,085,127
10	1948	9,631,032	3,000,000	652,891	1,[illegible]	—	3,800,000	1,214,141
11	1949	9,575,697	3,000,000	688,284	[illegible]	—	3,800,000	1,283,413
12	1950	9,574,452	3,000,000	735,328	[illegible]	—	3,800,000	1,476,124
13	1951	9,548,997	3,000,000	797,279	[illegible]	—	3,800,000	1,634,258
14	1952	9,243,630	3,000,000	873,748	[illegible]	—	3,800,000	1,532,382
15	1953	7,022,145	3,000,000	443,892	[illegible]	—	3,800,000	221,747*
16	1954	1,880,457	3,000,000	—	[illegible]	—	1,575,242	2,697,785*
DATA:		Sch. 16a, Col. 1	A	Sch. 17, Col. 1	Sch. 20, Col. 2	Sch. 5, Col. b	Sch. 10a, Col. b	Col. b-(b+d+e+f+g)

A - Assumed rate reduction.

(*) Negative amounts.

Natural Gas Pipeline Company of America
And
Texoma Natural Gas Company
(Combined Companies)

Sch. 19a

Borrowings and Interest on Borrowings Based on Admitted Earnings

Line No.	Dates	Debt Obligations at Beginning of Year	Borrowings* or Repayments*	Balance End of Period	Interest at 6% per Annum		Net Change in Other Net Current Assets
					Accrued	Paid	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	1/ 1/39 to 6/30/39	$ 300,000 A	$	$	$ 9,000	$	$
2	6/30/39		300,000 B			9,000	
3			$ 300,000		$9,000	$9,000	—
4	12/ 1/46		$ 300,000 *C				
5	12/ 1/46 to 12/31/46			300,000	1,500	—	
6			$ 300,000 *		1,500	—	1,500*
7	1/ 1/47 to 5/31/47	300,000			7,500		
8	5/31/47		300,000 D			9,000	
9			300,000		7,500	9,000	1,500
Data:		See Notes.	See Notes.	Col. b–c	E	F	Col. f–e

A—Balance as at January 1, 1939 from Ex. 137, pg. 1, L. 28.
B—Assumed to be paid on June 30, 1939.
C—Assumed to be borrowed on December 1, 1946.
D—Assumed to be paid on May 31, 1947.
E—Computed on amount in col. b for period in col. a.
F—Computed on balance at beginning of period for 6 months.

Exhibit No. 188.

3833

2778 Natural Gas Pipeline Company of America Sch. 19b
And
Texoma Natural Gas Company
(Combined Companies)
Borrowings and Interest on Borrowings
Based on Admitted Earnings after Reflecting Rate Reduction of
$3,000,000 Per Year Effective 1/1/40

Line No.	Dates	Debt Obligation Outstanding	Borrowings or Repayments*	Interest at 6% per Annum Accrued	Interest at 6% per Annum Paid
	(a)	(b)	(c)	(d)	(e)
1	1/1/39 to 6/30/39	$ 300,000A		$ 9,000	
2	6/30/39		$ 300,000*		$ 9,000
3	1939		300,000*	9,000	9,000
4	12/1/40		1,500,000		
5	12/1/40 to 12/31/40			7,500	
6	1940		1,500,000	7,500	
7	1/1/41 to 6/1/41	1,500,000		37,500	
8	6/1/41		1,400,000		45,000
9	6/1/41 to 12/1/41	2,900,000		87,000	
10	12/1/41		1,000,000		87,000
11	12/1/41 to 12/31/41	3,900,000		19,500	
12	1941		2,400,000	144,000	132,000
13	1/1/42 to 6/1/42	3,900,000		97,500	
14	6/1/42		1,700,000		117,000
15	6/1/42 to 12/1/42	5,600,000		168,000	
16	12/1/42		1,400,000		168,000
17	12/1/42 to 12/31/42	7,000,000		35,000	
18	1942		3,100,000	300,500	285,000
19	1/1/43 to 6/1/43	7,000,000		175,000	
20	6/1/43		1,500,000		210,000
21	6/1/43 to 12/1/43	8,500,000		255,000	
22	12/1/43		1,200,000		255,000
23	12/1/43 to 12/31/43	9,700,000		48,500	
24	1943		2,700,000	478,500	465,000
25	1/1/44 to 6/1/44	9,700,000		242,500	
26	6/1/44		1,900,000		291,000
27	6/1/44 to 12/1/44	11,600,000		348,000	
28	12/1/44		1,500,000		348,000
29	12/1/44 to 12/31/44	13,100,000		65,500	
30	1944		3,400,000	656,000	639,000
31	1/1/45 to 6/1/45	13,100,000		327,500	
32	6/1/45		1,900,000		393,000
33	6/1/45 to 12/1/45	15,000,000		450,000	
34	12/1/45		1,600,000		450,000
35	12/1/45 to 12/31/45	16,600,000		83,000	
36	1945		3,500,000	860,500	843,000
37	1/1/46 to 6/1/46	16,600,000		415,000	
38	6/1/46		2,600,000		498,000
39	6/1/46 to 12/1/46	19,200,000		576,000	
40	12/1/46		2,000,000		576,000
41	12/1/46 to 12/31/46	21,200,000		106,000	
42	1946		4,600,000	1,097,000	1,074,000

2779

Natural Gas Pipeline Company of America
And
Texoma Natural Gas Company
(Combined Companies)
Borrowings and Interest on Borrowings
Based on Admitted Earnings after Reflecting Rate Reduction of
$3,000,000 Per Year Effective 1/1/40

Sch. 19b
(Cont'd.)

Line No.	Dates	Debt Obligation Outstanding	Borrowings or Repayments*	Interest at 6% per Annum	
				Accrued	Paid
	(a)	(b)	(c)	(d)	(e)
43	1/1/47 to 6/1/47	$21,200,000		$ 530,000	
44	6/1/47		$1,400,000*		$ 636,000
45	6/1/47 to 12/1/47	19,800,000		594,000	
46	12/1/47		1,800,000*		594,000
47	12/1/47 to 12/31/47	18,000,000		90,000	
48	1947		3,200,000*	1,214,000	1,230,000
49	1/1/48 to 6/1/48	18,000,000		450,000	
50	6/1/48		1,600,000*		540,000
51	6/1/48 to 12/1/48	16,400,000		492,000	
52	12/1/48		2,000,000*		492,000
53	12/1/48 to 12/31/48	14,400,000		72,000	
54	1948		3,600,000*	1,014,000	1,032,000
55	1/1/49 to 6/1/49	14,400,000		360,000	
56	6/1/49		1,700,000*		432,000
57	6/1/49 to 12/1/49	12,700,000		381,000	
58	12/1/49		2,100,000*		381,000
59	12/1/49 to 12/31/49	10,600,000		53,000	
60	1949		3,800,000*	794,000	813,000
61	1/1/50 to 6/1/50	10,600,000		265,000	
62	6/1/50		1,800,000*		318,000
63	6/1/50 to 12/1/50	8,800,000		264,000	
64	12/1/50		2,200,000*		264,000
65	12/1/50 to 12/31/50	6,600,000		33,000	
66	1950		4,000,000*	562,000	582,000
67	1/1/51 to 6/1/51	6,600,000		165,000	
68	6/1/51		1,900,000*		198,000
69	6/1/51 to 12/1/51	4,700,000		141,000	
70	12/1/51		2,400,000*		141,000
71	12/1/51 to 12/31/51	2,300,000		11,500	
72	1951		4,300,000*	317,500	339,000
73	1/1/52 to 6/1/52	2,300,000		57,500	
74	6/1/52		2,300,000*		69,000
75	1952		2,300,000*	57,500	69,000
Data		B	C	D	E

2780 Natural Gas Pipeline Company of America

and

Texoma Natural Gas Company

(Combined Companies)

Footnotes to

Schedule 19b.

•—Negative amounts.

A—Balance as at January 1, 1939 from Ex. 137, pg. 1, L28.

B—Computed from Col. c.

C—Assumed see Assumption D.

D—Computed on amount in Col. b for period in Col. a.

E—Computed on balance at beginning of period for 6 months.

Natural Gas Pipeline Company of America
And
Texoma Natural Gas Company
(Combined Companies)

Interest Paid and Accrued
Based on Admitted Earnings

Line No.	Year	Interest Paid			Interest Accrued			Net Change in Other Net Current Assets
		On Bonds	On Borrowings	Total	On Bonds	On Borrowings	Total	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	1939	$2,727,000	$9,000	$2,736,000	$2,716,500	$9,000	$2,725,500	$ 10,500
2	1940	2,469,000		2,469,000	2,457,500		2,457,500	11,500
3	1941	2,187,000		2,187,000	2,174,500		2,174,500	12,500
4	1942	1,875,000		1,875,000	1,860,500		1,860,500	14,500
5	1943	1,527,000		1,527,000	1,512,500		1,512,500	14,500
6	1944	1,165,500		1,165,500	1,148,750		1,148,750	16,750
7	1945	763,500		763,500	746,750		746,750	16,750
8	1946	361,500		361,500	342,250	1,500	343,750	17,750
9	1947		9,000	9,000		7,500	7,500	1,500
Data:		Sch. 15—Col. f	Sch. 19a—Col. f	Col. b+c	Sch. 15—Col. e	Sch. 19a—Col. e	Col. e+f	Col. d-g

(Combined Companies)

Interest Paid and Accrued Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 Per Year Effective 1/1/40.

Line No.	Year	Interest Paid			Interest Accrued			Net Change in Other Net Current Assets
		On Bonds	On Borrowings	Total	On Bonds	On Borrowings	Total	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	1939	$ 2,727,000	$ 9,000	$ 2,736,000	$ 2,716,500	$ 9,000	$ 2,725,500	$ 10,500
2	1940	2,469,000	—	2,469,000	2,457,500	7,500	2,465,000	4,000
3	1941	2,187,000	132,000	2,319,000	2,174,500	144,000	2,318,005	500
4	1942	1,875,000	285,000	2,160,000	1,860,500	306,500	2,161,000	1,000*
5	1943	1,527,000	465,000	1,992,000	1,512,500	478,500	1,991,000	1,000
6	1944	1,165,500	639,000	1,804,500	1,148,750	656,000	1,804,750	250*
7	1945	763,500	843,000	1,606,500	746,750	860,500	1,607,250	750*
8	1946	361,500	1,074,000	1,435,500	342,250	1,097,000	1,439,250	3,750*
9	1947		1,230,000	1,230,000		1,214,000	1,214,000	16,000
10	1948		1,032,000	1,032,000		1,014,000	1,014,000	18,000
11	1949		813,000	813,000		794,000	794,000	19,000
12	1950		582,000	582,000		562,000	562,000	20,000
13	1951		339,000	339,000		317,500	317,500	21,500
14	1952		69,000	69,000		57,500	57,500	11,500
Data:		Sch. 15, Col. f	Sch. 19b, Col. e	Col. b+c	Sch. 15, Col. e	Sch. 19b, Col. d	Col. e+f	Col. d—g

(*) Negative amounts.

Natural Gas Pipeline Company of America and Texoma Natural Gas Company.

(Combined Companies)

Liquidation Assets

Sch. 21a

Exhibit No. 188.

Line No.					
1	Dr. Reserve for Amortization of Capital Assets		$ 68,721,862		
2	Dr. Cash		457,452		Ex. 141, pg. 1, L. 28
3	To Capital Assets Cr.			$ 69,179,314	
	to record the final retirement of the plant.				
4	Dr. Reserve for Amortization of Capital Assets		383,320		Per line 11 below
5	Dr. Cash		830,180		Line 6-4
6	To Other Net Current Assets			1,213,500	Sch. 7a, Col. e L.16
	to record liquidation of working capital as follows:				
7	$ 24,314	Liquidating Salvage Value of Warehouse Stocks			Ex. 141, pg. 1, L. 29
8	567,366	Do. Working Capital			Ex. 141, pg. 1, L. 30
9	$ 591,680	Total Liquidating Salvage Value			Line 7 + 8
10	975,000	Working Capital			Ex. 141, pg. 1, L. 24
11	$ 383,320	Loss on Liquidation			Line 10 - 9

Exhibit No. 188.

2784

Natural Gas Pipeline Company of America
And
Texoma Natural Gas Company
(Combined Companies)

Liquidation Entries — Sch. 21b

Based on Admitted Earnings after Reflecting Rate Reduction of $3,000,000 Per Year Effective 1/1/40

Line No.				
1	Dr. Reserve for Amortization of Capital Assets...	$68,721,862		
2	Dr. Cash.....	457,452		Ex. 141, pg. 1, L. 28
3	To Capital Assets Cr. to record the final retirement of plant.....		$69,179,314	
4	Dr. Reserve for Amortization of Capital Assets...	383,320		Sch. 21a, L. 11
5	Dr. Cash.....	887,326		Line 6-line 4
6	To Other Net Current Assets to record Liquidation of working capital.....		1,270,646	Sch. 7b, Col. e, L. 16

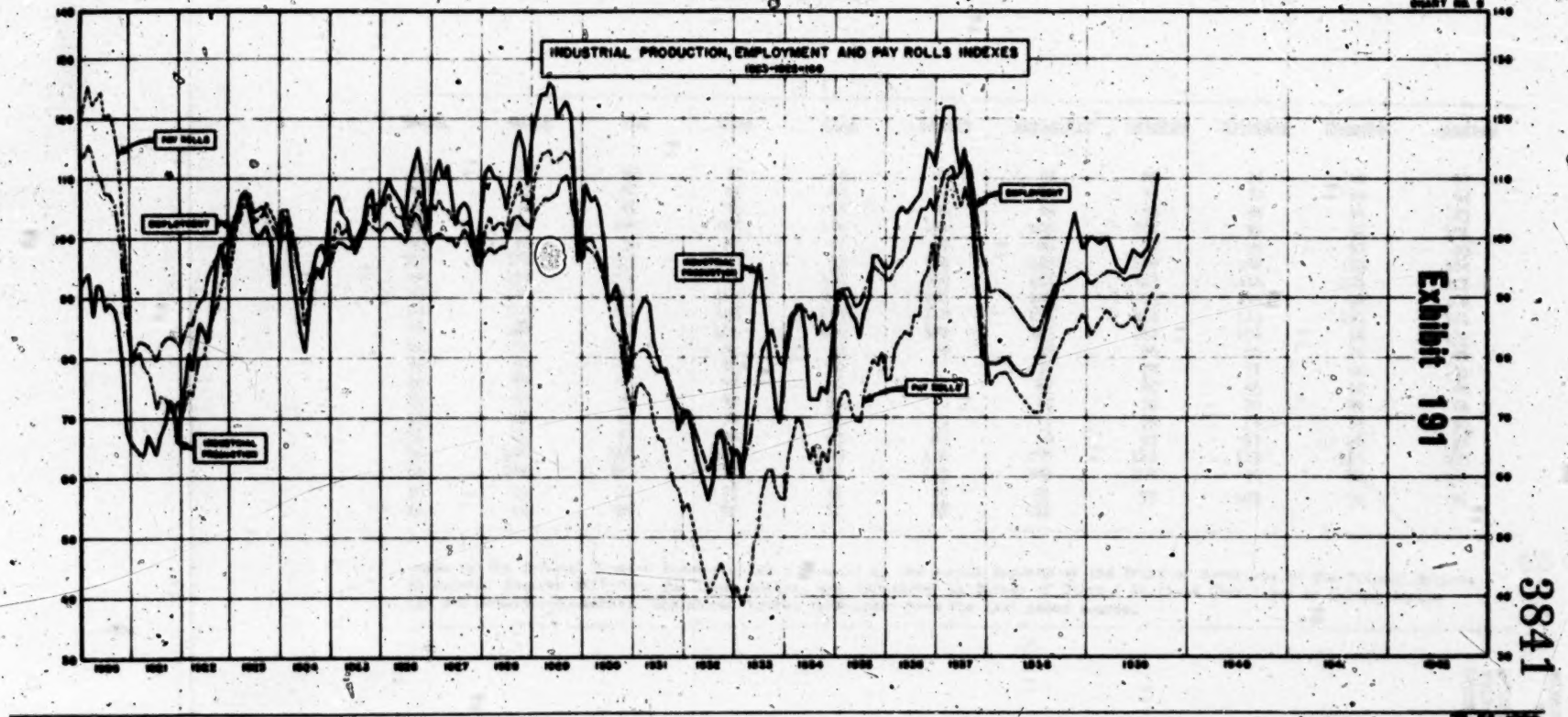


Exhibit 191

3841

2785

W-58-1576

2786

INDUSTRIAL PRODUCTION, EMPLOYMENT AND PAY ROLLS INDEXES

1923-1925 = 100

INDUSTRIAL PRODUCTION

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	92	93	94	87	92	92	88	89	88	86	78	68	87
1921	66	65	64	64	67	66	64	67	69	77	72	66	67
1922	72	76	81	78	82	86	84	83	89	96	95	92	85
1923	99	101	105	107	108	105	101	100	101	102	99	92	101
1924	99	104	103	96	90	84	81	87	95	98	99	97	93
1925	105	107	107	104	103	100	99	101	102	107	108	103	104
1926	105	108	110	108	107	106	103	103	113	115	110	101	107
1927	106	111	113	110	112	107	102	105	108	105	101	96	106
1928	105	111	112	110	110	108	105	110	116	116	115	109	111
1929	117	121	128	126	126	125	120	122	123	121	108	98	119
1930	103	109	106	107	105	99	90	90	92	90	86	76	95
1931	82	87	89	90	89	83	80	78	77	78	72	65	80
1932	74	71	68	64	61	59	56	59	57	68	65	60	63
1933	64	64	60	67	79	91	96	90	85	78	72	69	76
1934	77	83	87	88	89	84	73	73	73	75	74	72	78
1935	88	91	91	89	87	86	83	87	90	97	97	96	91
1936	95	95	96	104	105	104	103	106	107	110	113	114	104
1937	112	117	122	122	122	115	111	115	118	102	90	80	110
1938	79	79	80	78	77	77	81	87	91	97	104	98	86
1939	100	99	100	95	94	94	97	99	111				

Source of data: The computations were made by the Federal Reserve Board, and are contained in the Annual Reports of the Board of Governors of The Federal Reserve System and in the monthly issues of the Federal Reserve Bulletin. The index numbers are reproduced in Survey of Current Business (Published by United States Department of Commerce, Bureau of Foreign and Domestic Commerce). The above figures were taken from the last named source.

3843

SCHEDULE NO. 12
PART I
INDUSTRIAL PRODUCTION INDEX

2787

INDUSTRIAL PRODUCTION, EMPLOYMENT AND PAY ROLLS INDEXES

1923-1925 = 100

EMPLOYMENT

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	114.1	113.1	115.6	114.0	111.1	110.1	107.5	107.4	106.1	102.1	95.6	88.0	107.1
1921	79.5	81.7	82.9	82.1	82.0	81.2	79.7	81.1	83.0	83.7	83.7	82.7	82.0
1922	83.4	84.5	85.8	85.7	87.9	89.6	90.5	93.1	95.1	96.6	98.0	99.1	90.7
1923	100.2	102.4	104.6	105.1	105.2	105.7	104.6	104.8	105.3	104.0	102.8	101.1	103.8
24	100.1	101.7	101.9	100.1	99.8	98.8	98.6	98.0	98.2	99.0	98.5	96.1	98.4
25	96.6	98.3	99.2	99.1	98.6	98.4	98.3	100.0	101.9	102.6	102.2	101.8	99.8
1926	101.0	102.0	103.5	101.8	100.8	100.8	99.6	101.8	104.0	103.6	101.6	100.3	101.7
1927	98.6	100.2	100.9	100.3	99.6	99.7	98.6	99.9	101.2	100.2	98.0	96.5	99.5
1928	95.3	97.2	98.2	97.8	97.8	98.5	98.4	101.1	103.3	103.5	102.6	102.1	99.7
1929	101.7	104.1	105.4	106.7	106.5	106.8	107.3	109.2	110.3	109.0	104.6	100.7	106.0
1930	98.2	96.3	97.9	97.3	95.6	93.6	90.4	89.7	90.7	88.7	85.4	82.9	92.4
1931	80.1	80.8	81.2	81.9	80.6	78.8	77.7	77.9	78.3	75.5	72.7	72.0	78.1
1932	70.0	71.2	70.1	67.8	65.2	63.2	61.0	62.7	64.1	67.2	66.3	65.1	66.3
1933	64.3	64.7	62.3	63.9	68.6	71.4	76.2	81.3	85.0	84.6	81.2	79.5	73.4
1934	77.8	81.7	87.2	88.8	89.0	87.8	86.3	87.4	87.5	85.9	84.3	85.6	85.7
1935	86.7	89.6	91.0	91.2	89.9	88.3	88.7	91.7	93.9	95.2	94.6	94.2	91.3
1936	92.3	92.7	93.9	95.5	96.4	97.0	98.4	101.2	103.8	104.9	104.9	106.4	99.0
1937	104.7	107.6	110.1	111.3	111.5	110.3	110.9	112.3	112.3	110.3	104.1	97.4	108.6
1938	90.6	91.1	90.6	88.5	86.1	84.3	84.7	88.8	92.0	92.4	93.3	94.0	89.7
1939	92.2	93.6	94.3	94.1	93.0	93.4	93.5	96.4	100.1				

Source of data: The computations were made by the United States Bureau of Labor Statistics, and are contained in their publications. The Employment Indexes are reproduced in Survey of Current Business (Published by United States Department of Commerce, Bureau of Foreign and Domestic Commerce). The above figures were taken from the last named source.

3845

SCHEDULE NO. 12
PAGE 2
EMPLOYMENT
INDEX

INDUSTRIAL PRODUCTION, EMPLOYMENT AND PAY ROLLS INDEXES

1923-1925 = 100

PAY ROLLS

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1920	119.1	117.4	125.4	122.5	123.0	124.4	120.0	120.6	118.9	114.4	105.0	95.5	117.2
1921	80.6	80.1	81.0	76.8	77.4	75.6	71.6	73.6	73.3	71.9	70.9	72.7	75.6
1922	69.6	72.5	74.4	73.6	77.0	80.0	80.2	84.1	87.0	88.7	92.2	94.5	81.2
1923	93.9	97.8	102.6	103.8	107.1	107.2	102.9	103.1	103.8	105.2	103.9	102.7	102.9
1924	98.9	104.5	104.9	102.0	97.8	91.6	89.3	89.1	92.4	94.6	93.1	97.6	96.0
1925	96.0	101.0	102.8	100.4	101.4	99.2	97.5	100.1	99.4	105.3	105.1	105.5	101.1
1926	101.6	105.7	107.2	104.9	103.5	103.7	99.4	103.8	105.1	108.0	104.3	103.6	104.2
1927	98.6	104.8	106.6	105.0	104.8	103.2	99.1	102.5	102.1	102.7	98.5	100.0	102.4
1928	96.6	102.0	103.5	101.3	102.3	102.7	100.2	101.6	106.2	[illegible]	106.2	106.8	103.5
1929	103.8	110.8	113.0	114.1	113.3	112.7	108.6	113.5	114.4	113.7	104.9	101.2	110.4
1930	94.5	93.6	93.7	96.1	96.1	92.9	87.0	87.8	88.8	82.9	77.3	75.4	89.4
1931	70.3	74.4	73.8	77.1	75.6	69.9	64.6	68.4	65.8	61.8	58.7	57.8	67.8
1932	58.0	55.4	53.6	50.6	48.8	53.7	50.4	51.4	54.0	55.8	53.2	52.4	46.7
1933	50.3	51.4	58.3	60.4	64.4	66.1	62.7	56.6	61.3	61.1	57.3	56.5	58.1
1934	64.1	62.9	67.8	69.6	69.7	67.4	62.8	65.1	68.8	69.0	69.2	66.2	64.5
1935	67.5	72.6	74.4	74.6	71.8	69.8	69.1	74.8	76.8	78.5	78.6	80.5	74.1
1936	74.9	76.6	80.5	82.6	84.0	84.2	83.5	87.3	87.2	88.9	94.4	99.2	85.8
1937	94.6	100.1	105.9	103.7	110.1	107.6	105.2	108.7	108.2	104.9	97.3	88.6	102.5
1938	73.3	77.5	77.8	76.9	73.2	71.1	71.1	77.3	81.6	84.2	86.4	87.1	77.9
1939	83.7	86.0	87.6	89.3	89.0	86.5	88.4	89.9	93.7				

Source of data: The computations were made by the United States Bureau of Labor Statistics, and are contained in their publications. The Pay Roll Indexes are reproduced in Survey of Current Business (Published by United States Department of Commerce, Bureau of Foreign and Domestic Commerce). The above figures were taken from the last named source.

3847
PAY ROLLS
ITEM

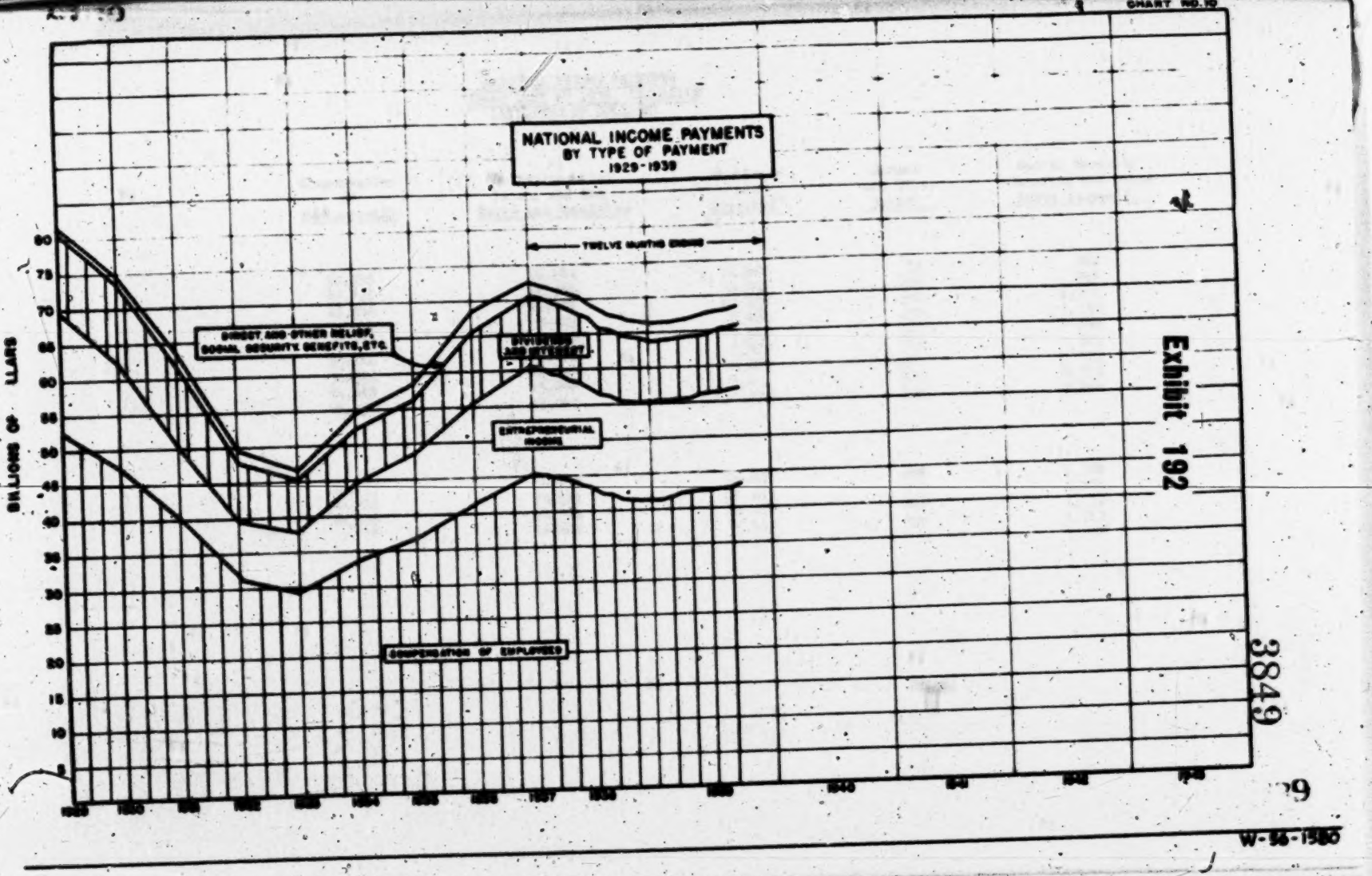


CHART NO. 10
NATIONAL INCOME PAYMENTS
BY TYPE OF PAYMENT
1929-1939
TWELVE MONTHS ENDING
DIRECT AND OTHER RELIEF, SOCIAL SECURITY BENEFITS, ETC.
DIVIDENDS AND INTEREST
ENTREPRENEURIAL INCOME
COMPENSATION OF EMPLOYEES
BILLIONS OF DOLLARS
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943
Exhibit 192
3849
W-56-1580

2790

NATIONAL INCOME PAYMENTS
[illegible]

Year or Period	Total Income Payments	Compensation of Employees(A)	Entrepreneurial Income and Net Rents and Royalties	Dividends and Interest	Direct and Other Relief	Social Security Benefits and Other Labor Income(B)
Year						
1929	$1,660	$2,356	16,845	11,520	72	858
1930	74,671	67,770	14,289	11,600	106	906
1931	63,397	40,044	11,186	10,156	170	1,901
1932	49,398	31,071	8,599	8,288	338	1,156
1933	46,777	29,082	8,826	7,566	554	959
1934	54,167	33,811	10,773	7,975	745	863
1935	58,572	36,513	12,141	8,005	1,001	912
1936	68,216	41,669	13,868	9,631	675	2,373
1937	72,449	45,258	15,013	10,225	841	1,112
12 Months Ended						
1936						
Jan. 31	72,237	45,077	14,956	10,237	859	1,106
Feb. 28	71,906	44,811	14,879	10,215	877	1,126
Mar. 31	71,261	44,449	14,788	10,021	892	1,171
Apr. 30	70,675	44,042	14,604	9,912	905	1,212
May 31	70,103	43,565	14,497	9,865	920	1,256
June 30	69,322	43,080	14,374	9,633	937	1,297
July 31	68,619	42,619	14,222	9,488	954	1,338
Aug. 31	67,902	42,206	14,049	9,286	969	1,392
Sept. 30	67,401	41,885	13,921	9,173	982	1,440
Oct. 31	66,957	41,624	13,814	9,049	993	1,481
Nov. 30	66,828	41,521	13,755	9,035	1,002	1,515
Dec. 31	66,271	41,557	13,686	8,876	1,007	1,545
1937						
Jan. 31	66,393	41,688	13,647	8,879	1,010	1,579
Feb. 28	66,496	41,834	13,633	8,843	1,013	1,601
Mar. 31	66,782	42,009	13,642	8,803	1,017	1,611
Apr. 30	66,912	42,144	13,660	8,673	1,022	1,613
May 31	67,158	42,329	13,706	8,674	1,028	1,621
June 30	67,519	42,580	13,719	8,529	1,033	1,628
July 31	67,731	42,798	13,697	8,569	1,038	1,629
Aug. 31	67,962	42,973	13,736	8,580	1,045	1,628
Sept. 30	68,326	43,149	13,837	8,662	1,053	1,625

See next page for Source of Data and Notes.

2791 **National Income Payments**

Years 1929 to 1939, Inclusive
(Millions of Dollars)

Source of Data: Statistics compiled by the U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, and published in Survey of Current Business. The above data for the years 1929 to 1937, inclusive, were taken from, and the twelve-months' totals for the years 1938 and 1939 are based on the monthly figures contained in the aforementioned publication.

Notes: (A) Includes income in kind as well as cash income.

(B) In addition to benefits payable under the Social Security program, this item includes pensions paid out by private industries and governmental agencies, compensation for industrial accidents, pensions to veterans, and also loans to World War veterans on their adjusted service certificates, and since June of 1936 adjusted service certificate payments less prior loans. These latter items account for the sharp rise in this type of income in 1931 and 1936.

Exhibit 193
NATIONAL INCOME PAYMENTS AND COST OF LIVING INDEXES
COST OF LIVING
100
90
80
70
60
50
40

2793

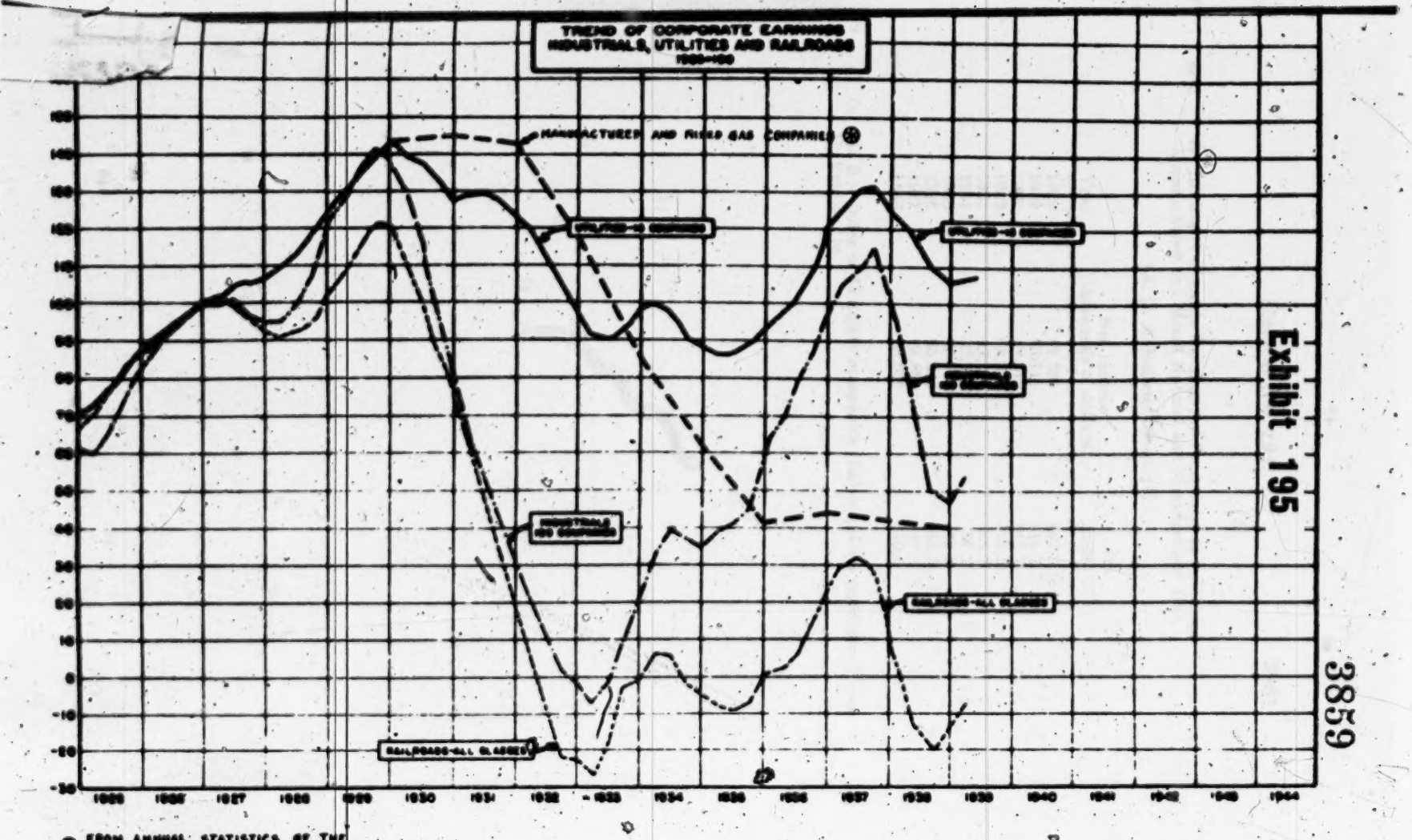
Schedule No. 15

National Income Payments and Cost of Living Indexes
Years 1929 to 1939, Inclusive

Year or Period	National Income Payments (1) (1929=100)	Cost of Living (2) (Monthly Average 1923=100)	National Income Payments at 1929 Prices
(a)	(b)	(c)	(d)=(b) ÷ (c)
Year			
1929	100.0	100.1	100.0
1930	91.4	96.7	94.5
1931	77.6	87.2	89.0
1932	60.5	77.9	77.7
1933	57.3	74.9	76.5
1934	66.3	79.4	83.5
1935	71.7	82.6	86.8
1936	83.5	84.8	98.5
1937	88.7	88.5	100.2
12 Months Ended 1938			
Jan. 31	88.5	88.6	99.9
Feb. 28	88.1	88.5	99.5
Mar. 31	87.3	88.4	98.8
Apr. 30	86.6	88.3	98.1
May 31	85.8	88.1	97.4
June 30	84.9	87.9	96.6
July 31	84.0	87.7	95.8
Aug. 31	83.2	87.5	95.1
Sept. 30	82.5	87.2	94.6
Oct. 31	82.0	86.9	94.4
Nov. 30	81.8	86.6	94.5
Dec. 31	81.2	86.4	94.0
1939			
Jan. 31	81.2	86.2	94.2
Feb. 28	81.3	86.1	94.4
Mar. 31	81.8	85.9	95.2
Apr. 30	81.9	85.8	95.5
May 31	82.2	85.6	96.0
June 30	82.7	85.5	96.7
July 31	82.9	85.3	97.2
Aug. 31	83.2	85.2	97.7
Sept. 30	83.7	85.2	98.2

Source of Data: (1) Statistics compiled by the U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, and published in Survey of Current Business. (2) Statistics compiled by the National Industrial Conference Board and reproduced in Survey of Current Business.

Note: The monthly index figures for 1938 and 1939 represent twelve-months' moving averages computed from the monthly figures contained in the aforementioned publication.



⊛ FROM ANNUAL STATISTICS OF THE MANUFACTURED GAS INDUSTRY IN 1938. STATISTICAL BULLETIN Nº 36.

Exhibit 195

2795 Net Income (Corporate Earnings) of Companies Distributing Manufactured and Mixed Natural and Manufactured Gas.

(A. G. A. Bulletin 36—p. 14)

Year	Net Income (thousands of dollars)	Index
1929	82,204	142.5 (a)
1930	83,119	144.1
1931	82,342	142.7
1932	68,332	118.5
1933	49,136	85.2
1934	35,280	61.2
1935	23,769	41.2
1936	25,314	43.9
1937	23,858	41.4
1938	23,030	40.0

(a) 142.5 = index of 15 utility companies 1929 corporate earnings—Chart 12, Exhibit 185.

CHART NO. 14

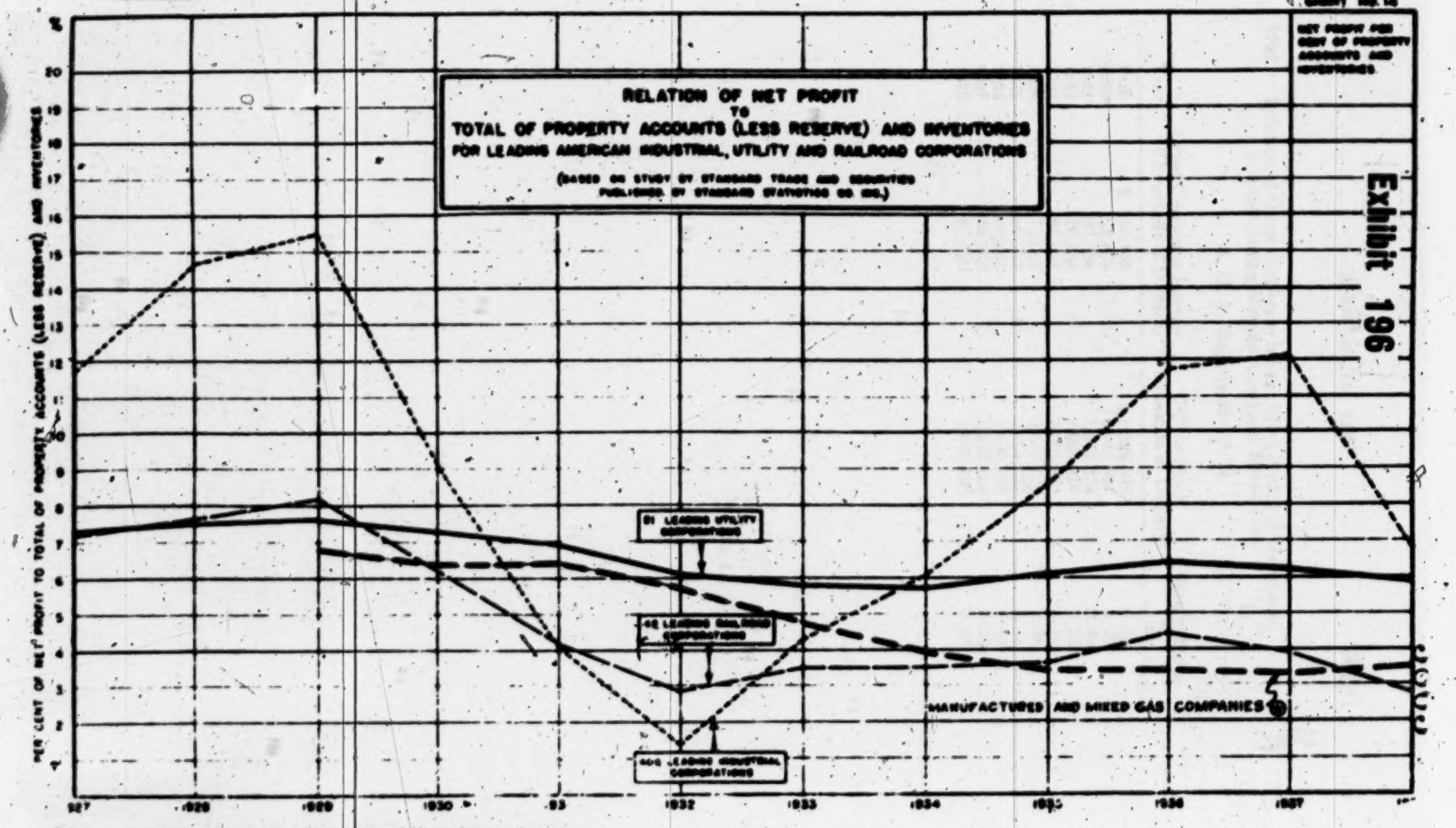


Exhibit 196

① FROM ANNUAL STATISTICS OF THE MANUFACTURED GAS INDUSTRY IN 1938 STATISTICAL BULLETIN NO. 36 – RELATION OF NET PROFIT TO GROSS UTILITY PLANT NOT INCLUDING INVENTORIES.

2797 **Relation of Gross Corporate Income (Net Profit) of Companies Distributing Manufactured and Mixed Gas.**

A. G. A. Bulletin 36—P. 14

Year	Gross Corporate Income (Thousands of Dollars)	Utility Plant (Thousands of Dollars)	Return Ratio %
1929	$ 123,409	$ 1,825,503	6.76
1930	123,473	1,915,567	6.45
1931	127,304	1,962,823	6.49
1932	115,606	1,998,979	5.78
1933	95,897	2,004,525	4.78
1934	79,559	2,010,125	3.96
1935	68,292	2,001,133	3.41
1936	68,654	1,996,358	3.44
1937	66,323	1,997,534	3.32
1938	67,570	1,967,490	3.43

Exhibit 197

2798

YIELD AT MARKET PRICES OF ELECTRIC OPERATING UTILITY PREFERRED STOCK
AND NUMBER OF TIMES DIVIDEND AND PRIOR REQUIREMENTS ARE EARNED
MARKET PRICES FOR WEEK ENDED NOVEMBER 17, 1939
INCOME FOR LATEST TWELVE MONTHS

FEDERAL P[illegible]

Docket No.[illegible]

Hearing Ex. No.[illegible]

Identification Number	Name of Company	Rate	Twelve Months Ended*	Times Requirements Earned	Average Market Price Week Ended Nov.17.1939	Yield at Market Price	Character of Service Rendered
11	Bangor Hydro-Electric Company, The	6%	Sept.30	1.57	106 **	5.66	Electric
17	Central Hudson Gas & Electric Company	4½%	12/31/38	2.51	111 ***	4.05	Elec.& Gas
18	Central Illinois Light Company	4½%	Aug. 31	2.21	110½	4.07	Elec.& Gas
26	Cleveland Elec. Illuminating Co., The	$4.50	Sept. 30	3.42	112 5/8	4.00	Electric
28	Connecticut Light & Power Company, The	5½%	Sept. 30	2.40	117 **	4.70	Elec.& Gas
30	Consolidated Edison Company of N.Y.,Inc.	$5.00	Aug. 31	1.98	107 3/8	4.66	Elec. & Gas
37	Consumers Power Company	$4.50	Sept. 30	1.73	98 3/8	4.57	Electric
39	Dayton Power & Light Company, The	4½%	June 30	2.95	111	4.05	Elec.& Gas
42	Duquesne Light Company, 1st Pfd.	5%	Aug. 31	3.02	117	4.27	Electric
73	Metropolitan Edison Company, Prior Pfd.	$6.00	Sept. 30	2.18	108 1/4***	5.54	Electric
86	Nebraska Power Company	6%	Sept. 30	1.89	110 ***	5.45	Electric
102	Ohio Public Service Company, 1st Pfd.	5½%	June 30	1.79	100 1/4***	5.49	Electric
109	Pacific Gas & Electric Company, 1st Pfd.	5½%	June 30	1.86	29	4.74	Elec.& Gas
111	Pennsylvania Water & Power Company	$5.00	9Mos.9/30	2.76	114 **	4.39	Electric
112	Philadelphia Electric Company	$5.00	Sept.30	3.18	117½	4.26	Electric
118	Public Service Company of Colorado,1st Pfd.	6%	12/31/38	1.68	105 **	5.71	Elec.& Gas
125	Public Service Electric & Gas Company	$5.00	Aug. 31	3.31	115 1/4	4.34	Elec.& Gas
134	San Diego Consolidated Gas & Electric Co.	7%	Aug. 31	1.88	115 ***	6.09	Elec.& Gas
138	Southern California Edison Co.,Ltd.Series C	5½%	June 30	1.63	28 1/8	4.88	Electric
154	Virginia Electric & Power Company	$6.00	Aug. 31	1.87	118	5.08	Elec.& Gas
156	Washington Water Power Company	$6.00	Sept.30	2.48	105 1/4***	5.70	Electric

Source of Data: Moody's Public Utilities, 1939, and Supplements thereto.

Notes: 1. The above list includes all electric operating utility preferred stocks listed in Schedule 19 of "The Problem of the 'Rate of Return' in Public Utility Regulation"(Federal Communications Commission, June 15, 1938) for which preferred dividend and prior requirements were earned in excess of 1.50 times in 1938.

2. Quotations from Commercial and Financial Chronicle, November 18, 1939.

* Period ending in 1939, unless otherwise indicated.

** Bid quotation, October 31, 1939

*** Average of Bid and Ask Quotation, October 31, 1939.

Exhibit 198

2799

EARNINGS - PRICE RATIOS OF ELECTRIC OPERATING UTILITY COMMON STOCKS AND PER CENT OF GROSS INCOME AVAILABLE FOR COMMON STOCKS
MARKET PRICES FOR WEEK ENDED NOVEMBER 17, 1939

ANNUAL INCOME PER LATEST QUARTERLY REPORTS

Identification Number	Name of Company	Average Market Price Week Ended Nov. 17.1939	Earnings Per Share Amount	12 Mos.Ended*	Earnings-Price Ratio	Per Cent of Gross Income Available for Common
5	Boston Edison Company	146 3/4	$ 9.92	Sept. 30	6.76%	76.14%
9	Central Hudson Gas & Elec. Corp.	14 1/4	0.85	12/31/38	5.96	60.12
11	Cleveland Electric Illum. Co., The	40 1/2	2.75	Sept. 30	6.79	70.78
13	Commonwealth Edison Company	31	2.41	Sept. 30	7.77	58.69
14	Connecticut Power Company, The	50 **	2.49	12/31/38	4.98	89.67
15	Consolidated Edison Co. of N.Y., Inc.	30 7/8	2.18	Sept. 30	7.06	45.68
16	Consolidated Gas Elec. Lt. and Power Company of Baltimore	79 5/8	4.70	Sept. 30	5.90	60.88
17	Detroit Edison Company, The	124	7.84	Sept. 30	6.32	62.79
18	Duke Power Company	72 1/2 **	4.23	12/31/38	5.83	72.78
19	Hartford Electric Light Co., The	65 1/2 **	2.95	12/31/38	4.50	97.26
27	Pacific Gas & Electric Company	32 1/8	2.74	June 30	8.53	40.95
30	Pennsylvania Water & Power Company	72	5.55	12/31/38	7.71	66.49
36	Southern California Edison Co., Ltd.	27	2.46	Sept. 30	9.11	39.72
38	Tampa Electric Company	31 3/8	2.40	Sept. 30	7.65	94.89

Source of Data: Moody's Public Utilities, 1939, and Supplements thereto.

Notes: (1) The above list includes all electric operating utility common stocks listed in Schedule 26 (1937 Earnings-March 1938 Prices) of "The Problem of the 'Rate of Return' in Public Utility Regulation" (Federal Communications Commission, June 15, 1938) which were not in excess of 95% owned by holding companies.

(2) Quotations from Commercial and Financial Chronicle, November 18, 1939.

* Period ending in 1939 unless otherwise indicated.

** Average of Bid and Ask Quotations - October 31, 1939.

Form G-17 10M 9-36 S.

FEDERAL POWER COMMISSION DOCKET NO. (FOR IDENTIFICATION)

EXHIBIT NO. Ec 201

REQUEST FOR VOUCHER ON

Natural Gas Pipe Line Company of America
NAME OF COMPANY

FEDERAL POWER COMMISSION

Docket No. G-102 & G-112

June 30, 1938

Hearing Ex. No. 201 (1938)

KINDLY ISSUE CHECK AND VOUCHER PAYABLE TO:

NAME Ralph E. Davis, Inc., Engineers

CARE OF

STREET 1710 Union Bank Building

CITY Pittsburgh, Pa.

AMOUNT

$ 5105.15

FOR Services rendered to June 14: Tennessee Natural Gas Co., Study of Natural Gas Supply and Value of Gas Producing Properties as of January 1, 1938----

Services:	Ralph E. Davis-----4 days	@ $150. per day----------	$ 600.00
	Gail F. Moulton---36-13/15 days	@100. per day----------	3886.71
	S. Cosco ---------21- 1/15 days	@ 15. per day----------	316.00
			$4802.71
Expense:	Gail F. Mounton - travel---	$ 278.31	
	Telephone & Telegraph -----	26.13	
		304.44	304.44
			$5105.15

CHARGE TO

APPROVED: [signature]

SIGNED [signature]

Kindly return check to writer for transmittal.

Exhibit 201

800

3873

2801

VO. REG. NO. 55810 VO. DATE JUN 21 1938 CHECK REG. NO. 55810

NATURAL GAS PIPELINE COMPANY OF AMERICA
CHICAGO, ILL.

DATE	DESCRIPTION	AMOUNT BILLED	DEDUCTIONS			NET AMOUNT PAID
			FREIGHT	DISCOUNT	CORRECTIONS	
6/14/38	Invoice	5,106.18				5,106.18
'18	TOTAL					

H.H.

OFFICE COPY

PAYABLE AT HARRIS TRUST & SAVINGS BANK
2-28 CHICAGO, ILLINOIS

CHICAGO, ILL. JUN 21 1938

Five Thousand One Hundred Five and 18/100 DOLLARS $ 5,106.18

IN ACCOUNT WITH

Ralph E. Davis, Inc., Engineers
1710 Union Bank Building
Pittsburgh, Pennsylvania

CORRECT

AUDITED WAYNE R. CALDWELL

APPROVED

2802

Natural Gas Pipe Line Company of America,
20 North Wacker Drive,
Chicago, Illinois.

PITTSBURGH, PA., June 14th, 1938 3875

INC.

TO RALPH E. DAVIS, DR.

ENGINEERS

GEOLOGICAL EXAMINATIONS
REPORTS—APPRAISALS
PETROLEUM AND NATURAL GAS

1710 UNION BANK BUILDING

On Account: Services Rendered to date:
Texoma Natural Gas Co. - Study of Natural Gas Supply and Value of Gas Producing Properties as of January 1, 1938:

Services:

Ralph E. Davis --------	4	days @ $150 per day ---	$ 600.00	✓
Gail F. Moulton -------	38-13/15	" @ 100 per day ---	3886.71	
S. Gosse -------------	21- 1/15	" @ 15 per day ---	316.00	✓
			$ 4802.71	

Expense:

Gail F. Moulton - travel ---	$ 276.31		
Telephone & Telegraph ------	26.13		
	$ 302.44	----------	302.44 ✓
			$ 5105.15

21/14 = 1.50

10/21 = 3/15 = .6

Year	Total	Domestic	Space Heating (1)	Commercial	Industrial (4)	Miscellaneous	Total	Domestic	Space Heating (1)	Commercial	Industrial
	Revenues From Sales To Consumers						Average Annual Revenue Per Therm Of Gas Sales (Ce				
1928	$35,138,694	$23,074,923	$1,132,843	$ 5,470,166	$ 3,680,041	$ 1,780,721	16.19	18.97	14.72	16.51	12.57
1929	36,514,642	23,320,722	1,438,444	5,537,313	4,040,078	2,178,085	15.46	18.74	14.63	15.60	11.87
1930	35,446,506	23,006,287	1,443,852	5,573,503	3,592,710	2,030,154	15.61	18.70	14.59	15.54	12.41
1931	33,185,585	21,926,794	1,234,948	4,873,130	3,118,593	2,032,120	14.11	18.53	14.24	15.40	7.25
1932	32,579,387	21,316,241	947,043	4,417,803	3,671,071	2,227,229	10.56	17.68	9.80	14.77	3.52
1933	29,621,609	19,789,702	1,132,815	4,119,157	2,343,866	2,236,069	11.93	17.58	7.80	14.62	4.63
1934	32,189,588	19,478,504	2,087,724	4,072,714	3,756,438	2,794,208	8.35	17.33	7.34	14.36	2.37
1935	33,844,736	19,488,554	2,695,624	3,953,243	4,697,712	3,009,603	7.78	17.30	7.34	14.31	2.34
1936	36,094,937	19,454,036	2,881,307	4,051,163	6,465,286	3,243,145	6.71	17.31	7.27	14.20	2.23
1937	36,225,513	19,450,234	2,761,628	4,062,813	7,023,957	2,926,881	6.59	17.36	7.30	14.12	2.27
1938 (a)	37,436,473	22,072,149	2,515,326	4,039,642	5,857,044	2,952,312	7.57	19.50	7.37	14.52	2.23
1938 (b)	34,769,102	19,404,778	2,515,326	4,039,642	5,857,044	2,952,312	7.03	17.14	7.37	14.52	2.23
	Gas Sales to Customers (Therms)						Average Annual Gas Sales (Therms) Per Customer				
1928	217,020,425	121,632,461	7,693,846	33,123,023	29,271,767	25,299,328	261.5	157.6	1,635.6	704.7	4,471.7
1929	236,136,953	124,471,930	9,834,415	35,504,700	34,015,215	32,310,693	281.1	159.5	1,847.5	757.3	5,171.8
1930	227,078,119	123,044,410	9,893,908	34,570,972	28,953,035	30,615,794	269.2	156.7	1,793.3	747.5	4,406.2
1931	235,192,308	118,356,809	8,672,385	31,643,703	43,031,436	33,487,975	283.7	153.3	1,610.8	701.7	6,819.6
1932	308,426,619	120,555,866	9,662,749	29,918,356	104,346,168	43,943,480	385.3	161.7	1,837.4	684.4	17,125.6
1933	252,595,500	112,578,873	14,356,120	28,165,476	50,672,112	46,822,919	325.1	155.5	2,068.6	659.2	8,597.2
1934	391,450,358	112,390,136	28,458,833	28,363,531	158,634,502	63,603,356	493.4	152.0	2,148.6	662.4	26,928.3
1935	441,481,977	112,633,627	36,718,198	27,627,483	200,735,217	63,767,452	550.1	150.7	1,852.3	653.1	34,561.8
1936	537,976,085	112,388,454	39,607,645	28,521,666	289,755,067	67,703,253	664.2	148.6	1,943.8	683.7	47,964.8
1937	549,346,248	112,040,439	37,835,097	28,771,711	308,944,320	61,754,681	657.5	143.2	1,821.2	702.79	49,502.4
1938	494,760,956	113,181,554	34,112,092	27,822,894	262,320,427	57,323,989	591.0	143.9	1,569.4	715.72	43,763.8
	Average Number of Customers During Year						Average Annual Revenue Per Customer				
1928	829,821	771,567	4,704	47,002	6,546	2	$42.34	$29.91	$240.83	$116.38	$562.18
1929	840,120	781,338	5,323	46,883	6,577	2	43.46	29.85	270.23	118.11	614.24
1930	843,393	785,057	5,517	46,249	6,571	2	42.03	29.31	261.71	116.19	546.75
1931	828,937	772,143	5,384	45,097	6,310	3	40.03	28.40	229.37	108.06	494.23
1932	800,542	745,470	5,259	43,717	6,093	3	40.70	28.59	180.08	101.05	602.51
1933	776,944 (3)	723,557	6,940	42,729	5,894	3	38.13	27.35	163.23	96.40	397.67
1934	793,349 (3)	739,312	13,245	42,820	5,891	3	40.57	26.35	157.62	95.11	637.66
1935	802,516 (3)	747,487	19,823	42,299	5,808	3	42.17	26.07	135.98	93.46	808.93
1936	810,002 (3)	756,242	20,376	41,719	6,041	2	44.56	25.72	141.41	97.11	1,070.23
1937	835,555 (3)	782,165	20,775	40,939	6,241	2	43.36	24.87	132.93	99.24	1,125.45
1938 (a)	837,201 (3)	786,253	21,736	38,874	5,994	2	44.72	28.07	115.72	103.92	977.15
1938 (b)							41.53	24.68	115.72	103.92	977.15

Notes:
(1) These figures include space heating only. The domestic consumption of these customers is included under domestic.
(2) These unit figures were not developed as they have no significance.
(3) Duplication in domestic and space heating customers has been eliminated in this total.
(4) Includes interruptible and firm industrial.
(a) Includes $2,667,371 arising from rate increase still in process of litigation.
(b) Excludes the item of $2,667,371.

Exhibit 202

	Industrial (4)	Miscellaneous	Total	Domestic	Space Heating (1)	Commercial	Industrial	Miscellaneous	
				Average Annual Revenue Per Therm Of Gas Sales (Cents)					
6	$ 3,680,041	$ 1,780,721	16.19	18.97	14.72	16.51	12.57	7.04	
3	4,040,078	2,178,085	15.46	18.74	14.63	15.60	11.87	6.74	
3	3,592,710	2,030,154	15.61	18.70	14.59	15.54	12.41	6.63	
0	3,118,593	2,032,120	14.11	18.53	14.24	15.40	7.25	6.07	
3	3,671,071	2,227,229	10.56	17.68	9.80	14.77	3.52	5.07	
7	2,343,866	2,236,069	11.93	17.58	7.80	14.62	4.63	4.78	
4	3,756,438	2,794,208	8.35	17.33	7.34	14.36	2.37	4.39	
3	4,697,712	3,009,603	7.78	17.30	7.34	14.31	2.34	4.72	
3	6,465,286	3,243,145	6.71	17.31	7.27	14.20	2.23	4.79	
3	7,023,957	2,926,881	6.59	17.36	7.30	14.12	2.27	4.74	
2	5,857,044	2,952,312	7.57	19.50	7.37	14.52	2.23	5.15	
3	5,857,044	2,952,312	7.03	17.14	7.37	14.52	2.23	5.15	
				Average Annual Gas Sales (Therms) Per Customer					
3	29,271,767	25,299,328	261.5	157.6	1,635.6	704.7	4,471.7		(2)
0	34,015,215	32,310,693	281.1	159.3	1,847.5	757.3	5,171.8		
2	28,953,035	30,615,794	269.2	156.7	1,793.3	747.5	4,406.2		
3	43,031,436	33,487,975	283.7	153.3	1,610.8	701.7	6,819.6		
3	104,346,168	43,943,480	385.3	161.7	1,837.4	684.4	17,125.6		
3	50,672,112	46,822,919	325.1	155.5	2,068.6	659.2	8,597.2		
	158,634,502	63,603,356	493.4	152.0	2,148.6	662.4	26,928.3		
3	200,735,217	63,767,452	550.1	150.7	1,852.3	653.1	34,561.8		
3	289,755,067	67,703,253	664.2	148.6	1,943.8	683.7	47,964.8		
	308,944,320	61,754,681	657.5	143.2	1,821.2	702.79	49,502.4		
	262,320,427	57,323,989	591.0	143.9	1,569.4	715.72	43,763.8		
				Average Annual Revenue Per Customer					
	6,546	2	342.34	$89.91	$240.83	$116.38	$562.18		(2)
3	6,577	2	43.46	29.85	270.23	118.11	614.24		
9	6,571	2	42.03	29.31	261.71	116.19	546.75		
	6,310	3	40.03	28.40	229.37	108.06	494.23		
	6,093	3	40.70	28.59	180.08	101.05	602.51		
9	5,894	3	38.13	27.35	163.23	96.40	397.67		
3	5,891	3	40.57	26.35	157.62	95.11	637.66		
3	5,808	3	42.17	26.07	135.98	93.46	808.93		
	6,041	2	44.56	25.72	141.41	97.11	1,070.23		
	6,241	2	43.36	24.87	132.93	99.84	1,125.45		
	5,994	2	44.72	28.07	115.72	103.92	977.15		
			41.53	24.68	115.72	103.92	977.15		

The domestic consumption of these customers is included under domestic.
they have no significance.
customers has been eliminated in this total.
1.
reaso still in process of litigation.

REVENUES FROM SALES TO CUSTOMERS

	Total	Domestic	Spaceheating (2)	Commercial	Industrial	Miscellaneous (3)
1928	$3,747,149.70	$3,290,970.07	$ 118,506.17	$ 337,673.46 (1)	$	$
29	4,078,552.98	3,486,150.98	178,103.38	414,298.62 (1)		
30	4,098,885.49	3,514,458.40	193,991.47	390,435.62 (1)		
31	3,918,419.24	3,369,619.88	189,863.75	356,094.94 (1)		2,840.67
32	3,717,320.52	3,214,367.57	191,201.34	201,257.40	108,659.21	1,835.00
33	3,493,749.18	2,869,678.61	295,629.77	198,950.77	125,662.80	2,827.23
34	3,796,819.94	2,657,060.56	673,805.90	199,341.81	265,351.25	1,260.40
35	4,121,946.35	2,628,306.82	939,656.55	201,432.78	351,537.68	1,012.52
36	4,227,741.68	2,627,079.00	1,000,868.61	212,077.32	383,874.19	3,842.56
37	4,164,230.87	2,579,730.51	958,173.01	215,702.81	310,176.13	2,446.41
38	4,208,572.58	2,702,943.86	896,716.79	213,413.82	393,434.13	2,063.98

GAS SALES TO CONSUMERS (Therms)

1928	15,572,052.96	12,981,210.24	685,153.92	1,905,688.80 (1)		
29	17,340,739.68	13,795,270.88	1,044,670.56	2,499,796.24 (1)		
30	17,296,452.00	13,896,627.36	1,142,600.16	2,256,804.48 (1)		
31	16,625,660.84	13,427,699.14	1,192,269.94	1,990,500.86 (1)		14,990.00
32	17,372,048.78	13,391,726.11	1,560,277.08	1,145,477.35	1,264,415.91	10,152.33
33	20,741,570.65	12,056,163.73	2,983,385.34	1,231,716.89	4,449,135.37	21,169.32
34	34,132,163.57	11,307,556.40	7,723,798.96	1,250,083.70	13,831,747.11	18,978.40
35	42,066,536.10	11,301,951.77	10,659,214.28	1,256,149.43	18,634,194.82	15,025.80
36	44,136,252.58	11,495,324.11	11,752,294.20	1,332,641.79	19,512,812.00	43,180.40
37	38,338,683.05	11,945,346.48	11,142,653.11	1,334,148.47	13,868,272.19	27,762.80
38	43,218,110.00	12,293,810.00	10,123,585.00	1,321,916.00	19,456,244.00	20,555.00

NUMBER OF CUSTOMERS

1928	82,136	81,296	273	567 (1)		(4)
29	84,825	83,897	343	585 (1)		
30	86,154	85,071	472	611 (1)		
31	86,013	84,929	503	601 (1)		
32	82,022	80,934	570	456	62	
33	81,216	77,797	2,929	433	57	
34	81,905	77,166	4,252	420	67	
35	83,510	78,386	4,594	456	74	
36	85,325	80,575	4,308	301	61	
37	87,236	82,591	4,635	436	74	
38	88,941	83,512	4,916	435	78	

AVERAGE ANNUAL REVENUE PER THERM (Cents)

	Total	Domestic	Spaceheating (2)	Commercial
1928	24.1	25.4	17.3	17.7 (1)
29	23.5	25.3	17.0	16.6 (1)
30	23.7	25.3	17.0	17.3 (1)
31	23.6	25.1	15.9	17.89 (1)
32	21.5	24.0	12.3	17.6
33	17.8	23.8	9.9	16.2
34	11.1	23.5	8.7	15.9
35	9.8	23.3	8.7	16.0
36	9.6	22.9	8.5	15.9
37	10.9	22.4	8.6	16.0
38	9.7	22.0	8.9	16.1

AVERAGE ANNUAL SALES PER CUSTOMER (Therms)

1928	189.6	159.7	2,509.7	3,361.0 (1)
29	204.4	164.4	3,045.7	4,273.2 (1)
30	200.8	163.4	2,420.8	3,693.6 (1)
31	193.3	158.3	2,045.1	3,312.0 (1)
32	211.8	165.5	2,737.3	2,512.0
33	255.4	155.0	1,018.6 (5)	2,844.6
34	416.7	145.5	1,816.5 (5)	2,976.4
35	503.7	144.2	2,363.8	2,754.7
36	517.3	142.7	2,720.0	3,497.7
37	437.0	144.6	2,404.0	3,060.0
38	485.9	147.2	2,059.3	3,030.9

AVERAGE ANNUAL REVENUE PER CUSTOMER

1928	45.62	40.48	434.09	595.54 (1)
29	48.08	41.55	519.25	708.20 (1)
30	47.58	41.31	411.00	639.01 (1)
31	45.56	39.72	325.67	357.72 (1)
32	45.32	39.72	335.44	441.35
33	43.02	36.09	100.93	459.47
34	46.36	34.45	150.47	474.62
35	49.36	33.53	204.54	441.74
36	49.55	32.60	232.33	556.63
37	47.46	32.45	206.73	490.14
38	47.32	32.37	182.41	490.61

Notes:- (1) Includes industrial also.
(2) This includes cooking and waterheating as well as spaceheating by those customers classified as spaceheating.
(3) Includes municipal only.
(4) No number of customers reported.
(5) Customers added during the year made these results low.

:ial	Miscellaneous (3)	Total	Domestic	Spaceheating (2)	Commercial	Industrial
			AVERAGE ANNUAL REVENUE PER THERM (Cents)			
	$	24.1	25.4	17.3	17.7 (1)	
		23.5	25.3	17.0	16.6 (1)	
		23.7	25.3	17.0	17.3 (1)	
	2,840.67	23.6	25.1	15.9	17.89(1)	15.8
559.21	1,835.00	21.5	24.0	12.3	17.6	10.6
562.60	2,827.23	17.8	23.8	9.9	16.2	2.8
551.25	1,260.40	11.1	23.5	8.7	15.9	1.9
537.68	1,012.52	9.8	23.3	8.7	16.0	1.9
574.19	3,842.56	9.6	22.9	8.5	15.9	2.0
176.13	2,446.41	10.9	22.4	8.6	16.0	2.2
434.13	2,063.98	9.7	22.0	8.9	16.1	2.0
			AVERAGE ANNUAL SALES PER CUSTOMER (Therms)			
		169.6	159.7	2,509.7	3,361.0(1)	
		204.4	164.4	3,045.7	4,273.2(1)	
		200.8	163.4	2,420.8	3,693.6(1)	
	14,990.00	193.3	158.3	2,045.1	3,312.0(1)	
415.91	10,152.33	211.8	165.5	2,737.3	2,512.0	20,393.8
135.37	21,169.32	255.4	155.0	1,018.6(5)	2,844.6	78,055.0
747.11	10,978.40	416.7	145.5	1,816.5(5)	2,976.4	206,444.0
194.82	15,025.80	503.7	144.2	2,363.8	2,754.7	251,813.4
812.00	43,180.40	517.3	142.7	2,728.0	3,497.7	319,882.2
272.19	27,762.00	437.0	144.6	2,404.0	3,060.0	197,679.4
244.00	20,555.00	485.9	147.2	2,059.3	3,038.9	249,464.7
			AVERAGE ANNUAL REVENUE PER CUSTOMER			
	(4)	45.62	40.48	434.09	595.54(1)	
		48.08	41.55	519.25	709.20(1)	
		47.58	41.31	411.00	639.01(1)	
		45.56	39.72	325.67	357.72(1)	
62		45.32	39.72	335.44	441.35	1,752.57
57		43.02	36.09	100.93	459.47	2,222.15
67		46.36	34.43	150.47	474.62	3,960.47
74		49.36	33.53	204.54	441.74	4,750.51
61		49.55	32.60	232.33	556.63	6,293.02
74		47.46	32.45	206.73	490.14	4,191.60
78		47.32	32.37	192.41	490.61	5,044.03

ceheating by those customers classified as spaceheating.

w.

	Total	Domestic	Spaceheating(2)	Commercial	Industrial(4)	Miscellaneous(1)	Total	Domestic	Spaceheating(2)	Commercial	I
	REVENUES FROM SALES TO CUSTOMERS						AVERAGE REVENUE PER THERM (CENTS)				
1928	$ 6,447,296.59	$5,249,641.84	--	$ 546,458.47	522,516.34	128,679.94	19.14	21.23	--	18.25	
29	7,295,662.26	5,826,694.93	--	604,919.59	688,439.31	175,608.43	18.77	20.94	--	18.16	
30	7,400,787.91	5,991,513.92	--	639,600.79	620,954.01	148,719.19	18.98	20.97	--	18.36	
31	6,937,134.61	4,827,514.68	897,935.74	623,257.07	446,181.34	142,245.78	18.57	22.22	15.07	18.59	
32	6,577,692.95	4,698,818.57	833,680.59	592,405.86	331,779.42	121,008.51	17.21	21.57	11.69	17.41	
33	6,111,671.82	4,289,619.95	876,885.30	527,798.17	296,937.75	120,430.65	15.43	21.42	10.03	17.32	
34	6,424,406.19	3,966,589.12	1,460,161.63	506,442.52	360,593.02	130,619.90	13.03	21.29	8.54	17.07	
35	6,827,821.36	3,861,450.69	1,992,831.95	499,814.47	379,996.82	93,727.43	12.45	21.29	8.49	16.87	
36	7,208,547.81	3,877,500.98	2,255,419.67	532,296.44	458,629.54	84,701.18	11.86	21.34	8.36	16.83	
37	7,014,710.60	3,858,867.34	2,295,185.41	558,513.63	44,252.78	57,891.44	12.89	21.30	8.42	16.55	
38	6,735,894.10	3,755,503.17	2,146,336.67	575,711.35	15,254.58	43,088.33(5)	13.13	20.50	8.65	16.36	
	GAS SALES TO CONSUMERS (THERMS)						ANNUAL SALES PER CUSTOMER (THERMS)				
1928	35,686,038	24,724,862	--	2,994,028	4,239,746	1,727,402	298.4	230.6	--	548.5	37,
29	38,859,106	27,819,803	--	3,330,319	5,686,969	2,022,015	319.8	241.3	--	562.1	31,
30	38,998,167	28,572,918	--	3,482,925	5,022,960	1,919,364	314.4	237.4	--	536.7	25,
31	37,348,397	21,725,560	5,959,723	3,352,143	4,357,872	1,953,099	293.3	184.4	2,953.3	474.5	22,
32	38,220,627	21,779,576	7,129,614	3,403,429	3,792,712	2,115,296	305.1	188.0	3,447.6	495.1	20,
33	39,600,127	20,022,506	8,744,879	3,047,230	5,593,040	2,192,472	320.1	175.8	3,068.4	466.5	33,
34	49,314.967	18,628,057	17,101,001	2,966,603	7,987,290	2,632,016	386.7	163.0	2,642.3	467.5	44,
35	54,833,631	18,137,092	23,474,114	2,962,555	8,675,525	1,584,345	418.7	156.8	2,728.0	474.3	44,
36	60,763,053	18,173,730	26,990,310	3,162,046	11,052,477	1,384,490	445.8	151.2	2,945.3	493.5	54,
37	54,420,127	18,116,345	27,259,802	3,375,121	4,212,046	1,456,813	389.8	147.3	2,834.5	521.5	21,
38	51,315,321	18,317,115	24,799,464	3,519,830	3,313,839	1,365,073(5)	362.4	147.2	2,439.7	522.9	12,
	AVERAGE NUMBER OF CUSTOMERS						ANNUAL REVENUE PER CUSTOMER (DOLLARS)				
1928	112,909	107,206	--	5,459	114	130	57.10	48.97	--	100.10	4,
29	121,515	115,271	--	5,925	178	141	60.04	50.55	--	102.10	3,
30	127,227	120,358	--	6,489	198	182	58.17	49.78	--	98.57	3,
31	127,325	117,800	2,018	7,065	196	246	54.48	40.98	444.96	88.22	2,
32	125,254	115,866	2,068	6,874	184	262	52.51	40.55	403.13	86.18	1,
33	123,708	113,879	2,850	6,532	169	278	49.40	37.67	307.68	80.80	1,
34	127,541	114,265	6,472	6,346	179	279	50.37	34.71	225.61	79.80	2,
35	130,976	115,638	8,605	6,246	197	290	52.13	33.39	231.59	80.02	1,
36	136,294	120,210	9,164	6,407	204	309	52.89	32.26	246.12	83.08	2,
37	139,594	122,983	9,617	6,472	199	323	50.25	31.38	238.66	86.30	1,
38	141,602	124,434	10,165	6,732	265	6(5)	47.57	30.18	211.15	85.32	

Note:--(1) Includes municipal and other gas corporations.
(2) This includes cooking and waterheating as well as spaceheating used by those customers classified as spaceheating.
(3) This territory includes Evanston, Wilmette, Oak Park, Maywood, Berwyn, Blue Island, Etc.
(4) Does not include interruptible load.
(5) Starting with 1938 most of the municipal was reclassified as commercial.

rcial	Industrial(4)	Miscellaneous(1)	Total	Domestic	Spaceheating(2)	Commercial	Industrial	Miscellaneous(1)
3				AVERAGE REVENUE PER THERM (CENTS)				
38.47	522,516.34	128,679.94	19.14	21.23	--	18.25	12.32	7.45
19.59	688,439.31	175,608.43	18.77	20.94	--	18.16	12.11	8.68
10.79	620,954.01	148,719.19	18.98	20.97	--	18.36	12.36	7.75
37.07	446,181.34	142,245.78	18.57	22.22	15.07	18.59	10.24	7.28
15.86	331,779.42	121,008.51	17.21	21.57	11.69	17.41	8.75	5.72
18.17	296,937.75	120,430.65	15.43	21.42	10.03	17.32	5.31	5.49
12.52	360,593.02	130,619.90	13.03	21.29	8.54	17.07	4.51	4.96
14.47	379,996.82	93,727.43	12.45	21.29	8.49	16.87	4.38	5.92
16.44	458,629.54	84,701.18	11.86	21.34	8.36	16.83	4.15	6.12
13.63	44,252.78	57,891.44	12.89	21.30	8.42	16.55	5.80	3.97
11.35	15,254.58	43,088.33(5)	13.13	20.50	8.65	16.36	6.50	3.16(5)
				ANNUAL SALES PER CUSTOMER (THERMS)				
38	4,239,746	1,727,402	298.4	230.6	--	548.5	37,190.8	13,287.7
39	5,686,969	2,022,015	319.8	241.3	--	562.1	31,949.3	14,340.5
35	5,022,960	1,919,364	314.4	237.4	--	536.7	25,368.5	10,546.0
33	4,357,872	1,953,099	293.3	184.4	2,953.3	474.5	22,234.0	7,939.4
39	3,792,712	2,115,296	305.1	188.0	3,447.6	495.1	20,612.6	8,073.6
30	5,593,040	2,192,472	320.1	175.8	3,068.4	466.5	33,094.9	7,886.6
33	7,987,290	2,632,016	386.7	163.0	2,642.3	467.5	44,621.7	9,433.7
35	8,675,525	1,584,345	418.7	156.8	2,728.0	474.3	44,038.2	5,463.3
36	11,052,477	1,384,490	445.8	151.2	2,945.3	493.5	54,178.8	4,480.6
31	4,212,046	1,456,813	389.8	147.3	2,834.5	521.5	21,166.1	4,510.3
30	3,313,839	1,365,073(5)	362.4	147.2	2,439.7	522.9	12,505.1	227,512.2(5)
				ANNUAL REVENUE PER CUSTOMER (DOLLARS)				
39	114	130	57.10	48.97	--	100.10	4,583.48	989.85
35	178	141	60.04	50.55	--	102.10	3,867.64	1,245.45
39	198	182	58.17	49.78	--	98.57	3,136.13	817.14
35	196	246	54.48	40.98	444.96	88.22	2,276.44	576.23
34	184	262	52.51	40.55	405.13	86.18	1,803.15	461.86
32	169	278	49.40	37.67	307.68	80.80	1,757.03	433.20
33	179	279	50.37	34.71	225.61	79.80	2,014.49	468.17
33	197	290	52.13	33.39	231.59	80.02	1,928.92	325.20
37	204	309	52.89	32.26	246.12	83.08	2,248.18	274.11
32	199	323	50.25	31.38	238.66	86.30	1,227.40	179.23
32	265	6(5)	47.57	30.18	211.15	85.52	812.28	7,181.39(5)

rporations.
ing as well as spaceheating used by those customers classified as spaceheating.
ilmette, Oak Park, Maywood, Berwyn, Blue Island, Etc.

ipal was reclassified as commercial.

	Total	Domestic	Spaceheating(2)	Commercial	Industrial	Miscellaneous(3)	Total	Domestic	Spaceheating(2)	Commercia
				REVENUE FROM SALES TO CUSTOMERS				AVERAGE ANNUAL REVENUE PER THERM (CENT		
1928	$ 497,700.18	$ 409,019.98	$ --	$ 74,243.53	$ 11,339.48	$ 3,097.19	23.5	24.1		21.7
29	540,102.60	424,930.94	--	69,047.43	43,187.66	2,936.57	21.7	24.0		20.0
30	544,528.02	428,698.59	--	65,018.99	47,786.13	3,024.31	21.1	23.9		19.1
31	531,761.03	419,634.96	1,967.02	66,009.02	40,554.44	3,595.59	20.5	23.6	14.7	18.9
32	503,112.10	402,380.81	4,370.57	58,821.33	33,825.29	3,714.10	19.2	21.9	12.4	17.7
33	489,437.73	363,484.52	11,839.67	54,895.61	55,862.01	3,355.92	13.8	21.8	9.5	17.4
34	725,096.33	346,528.90	32,756.58	52,186.01	290,096.46	3,528.38	4.2	21.6	8.9	17.0
35	943,418.20	352,744.32	44,344.18	54,002.19	488,699.08	3,628.43	3.1	21.6	8.6	16.9
36	1,177,510.02	354,997.45	55,269.70	57,640.00	705,880.63	3,722.24	2.6	21.6	8.5	16.7
37	2,009,339.78	366,753.51	52,974.31	61,178.31	1,524,797.14	3,636.51	2.4	21.2	8.6	16.5
38	1,791,646.06	377,929.94	47,932.44	64,622.35	1,301,161.35	--	2.6	21.0	9.0	16.4
				GAS SALES TO CONSUMERS(THERMS)				AVERAGE ANNUAL SALES PER CUSTOMER (TH		
1928	2,118,689	1,700,064	--	342,425	63,260	12,940	161.6	140.0		378.8
29	2,488,248	1,771,306	--	345,724	357,018	14,200	184.5	141.5		385.0
30	2,576,988	1,792,847	--	341,299	427,075	15,767	186.5	139.4		380.1
31	2,591,124	1,781,371	13,336	349,511	427,391	19,515	182.5	135.5	1,333.6	356.6
32	2,620,014	1,837,257	35,337	331,432	393,481	22,507	189.3	143.2	1,472.4	358.7
33	3,539,538	1,665,085	124,756	316,183	1,413,543	19,971	266.1	135.5	2,188.6	352.9
34	17,334,082	1,604,216	370,077	306,582	15,031,635	21,572	1,287.0	129.8	2,067.5	352.4
35	30,588,952	1,630,254	516,932	318,884	28,100,702	22,180	2,229.0	129.9	2,153.9	373.4
36	44,523,808	1,642,789	653,987	344,616	41,859,268	23,148	3,133.3	126.4	2,302.8	409.8
37	82,856,910	1,731,235	615,165	371,343	80,116,802	22,365	5,688.2	127.3	2,085.3	450.1
38	69,402,009	1,796,426	533,883	393,164	66,678,536	--	4,516.0	127.8	1,689.5	456.6
				AVERAGE NUMBER OF CUSTOMERS				AVERAGE ANNUAL REVENUE PER CUSTOMER (DO		
1928	13,110	12,142	--	904	34	30	37.96	33.69		82.13
29	13,484	12,521	--	898	35	30	40.06	33.94		76.89
30	13,817	12,859	--	898	29	31	39.41	33.34		72.40
31	14,199	13,148	10	980	26	35	37.45	31.92	196.70	67.36
32	13,840	12,831	24	924	24	37	36.35	31.36	182.11	63.66
33	13,303	12,289	57	896	24	37	36.79	29.58	207.71	61.27
34	13,469	12,355	179	870	26	39	53.83	28.05	183.00	59.98
35	13,723	12,551	240	854	35	43	68.75	28.10	184.77	63.23
36	14,210	12,999	284	841	42	44	82.86	27.31	194.61	68.54
37	14,827	13,602	295	825	60	45	135.52	26.96	179.57	74.16
38	15,368	14,061	316	861	130	--	116.58	26.88	151.68	75.05

Note:--(1) Includes Kankakee, Marseilles, Morris, Ottawa and Streator.
(2) Includes cooking and waterheating as well as spaceheating for those customers classified as spaceheating.
(3) Includes municipal and other corporations.

Miscellaneous[3]	Total	Domestic	Spaceheating[2]	Commercial	Industrial
		AVERAGE ANNUAL REVENUE PER THERM (CENTS)			
$ 3,097.19	23.5	24.1		21.7	17.9
2,936.57	21.7	24.0		20.0	12.1
3,024.31	21.1	23.9		19.1	11.2
3,595.59	20.5	23.6	14.7	18.9	11.5
3,714.10	19.2	21.9	12.4	17.7	8.6
3,355.92	13.8	21.8	9.5	17.4	4.0
3,528.38	4.2	21.6	8.9	17.0	1.9
3,628.43	3.1	21.6	8.6	16.9	1.7
3,722.24	2.6	21.6	8.5	16.7	1.7
3,636.51	2.4	21.2	8.6	16.5	1.9
--	2.6	21.0	9.0	16.4	2.0
		AVERAGE ANNUAL SALES PER CUSTOMER (THERMS)			
12,940	161.6	140.0		378.8	1,860.6
14,200	184.5	141.5		385.0	10,200.5
15,767	186.5	139.4		380.1	14,726.7
19,515	182.5	135.5	1,333.6	356.6	16,438.1
22,507	189.3	143.2	1,472.4	358.7	15,395.0
19,971	266.1	135.5	2,188.6	352.9	58,897.6
21,572	1,287.0	129.8	2,067.5	352.4	578,139.6
22,180	2,229.0	129.9	2,153.9	373.4	802,877.2
23,148	3,133.3	126.4	2,302.8	409.8	996,649.2
22,365	5,688.2	127.3	2,085.3	450.1	1,335,280.0
--	4,516.0	127.8	1,689.5	456.6	512,911.8
		AVERAGE ANNUAL REVENUE PER CUSTOMER (DOLLARS)			
30	37.96	33.69		82.13	333.51
30	40.06	33.94		76.89	1,233.93
31	39.41	33.34		72.40	1,647.80
35	37.45	31.92	196.70	67.36	1,559.79
37	36.35	31.36	182.11	63.66	1,409.39
37	36.79	29.58	207.71	61.27	2,327.58
39	53.83	28.05	183.00	59.98	11,157.56
43	68.75	28.10	184.77	63.23	13,962.83
44	82.86	27.31	194.61	68.54	16,806.68
45	135.52	26.96	179.57	74.16	25,413.29
--	116.58	28.88	151.68	75.05	10,008.93

[2] For those customers classified as spaceheating.

2807

Federal Power Commission. Docket No.
Exhibit No. 203 (For Identification)
Federal Power Commission
Docket No. G-109 & G-112
Hearing Exhibit No. 203

Federal Power Commission
Dockets Nos. G-109 & G-112
Exhibit No. 203

Residential Electric Service in U. S.

Year	Number of Customers December 31	Average Annual Use K Whr.	Average Annual Bill
1929	19,569,606	499	$31.44
1930	19,880,329	543	32.58
1931	19,658,018	578	33.18
1932	19,140,287	597	33.25
1933	19,300,834	595	32.67
1934	19,866,008	624	33.07
1935	20,446,436	672	33.53
1936	20,987,440	727	33.81
1937	21,697,515	793	34.81
1938	22,110,403	845	35.57

Source—Edison Electric Institute Statistical Bulletin No. 6—Year 1938.

2808

Federal Power Commission. Docket No.
Exhibit No. 204 (For Identification)
Federal Power Commission.
Docket No. G-109 & G-112
Hearing Exhibit No. 204

Commonwealth Edison Company (a)

	Domestic Service			Per Customer		Rate per
Year	Customers at Dec. 31	Total Consumption K.W.H.	Total Revenue $.	Consumption K.W.H.	Revenue	K.W.H. ¢
1929	—	483,642,404	$22,853,279	—	—	5.60
1930	805,099	537,311,231	24,754,719	468	25.50	5.45
1931	789,733	560,578,841	25,418,493	519	27.40	5.28
1932	759,670	550,021,066	24,853,317	490	27.00	5.51
1933	779,500	538,833,350	24,281,921	437	24.80	5.67
1934	801,601	573,411,021	25,693,749	715	32.05	4.48
1935	807,556	604,209,282	26,807,051	748	33.20	4.44
1936	823,468	623,240,752	26,940,584	757	32.72	4.32
1937	836,810	688,372,487	27,009,763	823	32.28	3.92
1938	836,282	721,313,345	27,948,125	863	33.42	3.87

(a) Consolidated in 1938 (only) to include Commonwealth Subsidiary Corporation; also 1938 reflects operations for entire year of Super-Power Company of Illinois, a subsidiary liquidated at December 31, 1938.

2809

Federal Power Commission. Docket No.
Exhibit No. 205 (For Identification)

Federal Power Commission
Dockets Nos. G-109 & G-112
Exhibit No. 205
Federal Power Commission
Docket No. G-109 & G-112
Hearing Exhibit No. 205

All Mortgage Bonds of Domestic Electric and Gas Utility Companies Traded on New York Curb September 15, 1939

	Coupon Rate and Maturity	Price Sept. 15 1939	Approx. Yield to Maturity
Alabama Power Co	5s, 1946	105	4.11%
" " "	5s, 1951	102-3/4	4.70
" " "	5s, 1968	101-1/2	4.90
" " "	4-1/2s, 1967	98-1/4	4.61
Appalachian Electric Power Co	4s, 1963	105	3.69
Arkansas Louisiana Gas Co	4s, 1951	101	3.89
Arkansas Power & Light Co	5s, 1956	102-3/4	4.76
Atlanta Gas Light Co	4-1/2s, 1955	100	4.50
Birmingham Electric Co	4-1/2s, 1968	91-1/2	5.05
Birmingham Gas Co	5s, 1959	89-1/4	5.93
Carolina Power & Light Co	5s, 1956	104	4.66
Central States Pr. & Lt. Corp	5-1/2s, 1953	69	9.57
Consol. Gas E L & Pr. Co. of Balt	3-1/4s, 1971	102-1/2	3.12
Edison Elec. Ill. Co. Boston	2-1/2s, 1965	105-1/2	3.19
Empire District El. Co	5s, 1952	102	4.79
Erie Lighting Co	5s, 1967	107-1/2	4.52
Florida Pr. & Lt. Co	5s, 1954	99	5.10
Georgia Power Co	5s, 1967	103-3/4	4.76
Georgia Pr. & Lt. Co	5s, 1978	67-1/4	7.65
Houston Lt. & Pr. Co	3-1/2s, 1966	104-1/8	3.27
Idaho Power Co	3-3/4s, 1967	103-1/2	3.55
Illinois Pr. & Lt. Corp	5s, 1956	96-1/4	5.34
" " " "	5-1/2s, 1954	98-5/8	5.63
" " " "	6s, 1953	101	5.88
Indiana Hydro Elec. Pr. Co	5s, 1958	94-3/4	5.42
Indiana Service Corp	5s, 1950	64-1/8	10.42
" " "	5s, 1963	64-1/2	8.49
Indianapolis Pr. & Lt. Co	3-3/4s, 1968	102	3.64
Interstate Power Co	5s, 1957	64-3/4	8.99
Interstate Public Service Co	5s, 1956	94-1/2	5.50
" " " "	4-1/2s, 1958	92	5.17
Jersey Central Pr. & Lt. Co	4-1/2s, 1961	104	4.21
" " " " "	5s, 1947	103-1/4	4.51
Kentucky Utilities Co	6-1/2s, 1948	105	5.77
" " "	5s, 1969	95-3/4	5.29
" " "	5s, 1961	96	5.31
Louisiana Pr. & Lt. Co	5s, 1957	105	4.59
Milwaukee Gas Light Co	4-1/2s, 1967	99-1/2	4.53
Minnesota Pr. & Lt. Co	4-1/2s, 1978	99-1/4	4.51
" " " "	5s, 1955	103-1/2	4.69
Mississippi Pr. & Lt. Co	5s, 1957	97-3/8	5.23
Mississippi Power Co	5s, 1955	93	5.67
Missouri Public Service Co	5s, 1960	87-1/2	6.05

2810

	Coupon Rate and Maturity	Price Sept. 15 1939	Approx. Yield to Maturity
Nassau & Suffolk Lighting Co	5s, 1945	94-3/8	6.13%
Nevada-California Elec. Corp	5s, 1956	75-3/4	7.57
New York Pr. & Lt. Corp	4-1/2s, 1967	104-3/8	4.23
New York State El. & Gas Corp	4-1/2s, 1980	100	4.50
Northern Indiana P. S. Co	5s, 1969	104-1/2	4.72
" " " "	5s, 1966	105-1/2	4.63
Northwestern Electric Co	6s, 1945	105-1/4	4.97
Ohio Power Co	3-1/4s, 1968	99-1/2	3.26
Ohio Public Service Co	4s, 1962	102-7/8	3.81
Oklahoma Power & Water Co	5s, 1948	100	5.00
Pacific Pr. & Lt. Co	5s, 1955	88-7/8	6.10
Penn. Cent. Lt. & Pr. Co	4-1/2s, 1977	96	4.73
Pennsylvania Electric Co	4s, 1971	97-1/2	4.13
" " "	5s, 1962	104-1/8	4.70
Peoples Gas Light & Coke Co	4s, 1981	94	4.31
" " " " "	4s, 1961	95-1/2	4.32
Phila. Electric Power Co	5-1/2s, 1972	112	4.77
Portland Gas & Coke Co. (1)	5s, 1940	72-1/2	....
Potomac Edison Co	5s, 1956	107	4.41
Puget Sound Pr. & Lt. Co	5-1/2s, 1949	90-3/4	6.79
" " " " "	5s, 1950	88-1/2	6.48
" " " " "	4-1/2s, 1950	84-1/2	6.49
Queens Borough Gas & El. Co	5-1/2s, 1952	88	6.91
Southern Carolina Pr. Co	5s, 1957	92-1/2	5.67
Southern Calif. Edison Co	3-3/4s, 1960	104-1/4	3.47
" " " " "B"	3-3/4s, 1960	104-3/4	3.43
Southern Counties Gas Co	4-1/2s, 1968	104-7/8	4.21
Southwestern Lt. & Pr. Co	5s, 1957	102-1/2	4.79
Texas Electric Service Co	5s, 1960	98-1/2	5.12
Texas Pr. & Lt. Co	5s, 1956	105-3/4	4.51
Tide Water Power Co	5s, 1979	94-3/4	5.31
Utah Pr. & Lt. Co	4-1/2s, 1944	93	6.13
Virginia Public Service Co	5-1/2s, 1946	96-1/2	6.13
" " "	5s, 1950	92-1/4	5.97
Wisconsin Pr. & Lt. Co	4s, 1966	100-1/4	3.99
		Average yield.....	5.15%

(1). Excluded from averages.

2811

Federal Power Commission. Docket No.
Exhibit No. 206 (For Identification)

Federal Power Commission
Dockets Nos. G-109 & G-112
Exhibit No. 206

Federal Power Commission
Docket No. G-109 & G-112
Hearing Ex. No. 206

All Preferred Stocks of Domestic Electric and Gas Operating Utilities Paying Full Dividends Listed* N. Y. Curb (September 15, 1939, Prices
*Incl. unlisted trading privileges.

Company	Dividend Rate	Price 9/15/39	Approx. Yield**
Alabama Pr. Co	$7	97	7.2%
" " "	$6	86	7.0
Appalachian Elec. Pr. Co	$7	108-109-3/4	6.4
Carolina P. & L. Co	$6	86-88	6.3
" " " "	$7	96-1/2- 98-1/2	7.1
Central Main Power Co	7%	101-1/2-103-1/2	6.8
Central N. Y. Power Corp	5%	87-1/4	5.7
Central P. & L. Co	7%	102-1/2	6.8
Con. Gas El. L. & Pr. Co. (Balt.)	4-1/2%	113-1/2	4.0
Georgia Power Co	$6	94-96	6.3
" " "	$5	82-90	5.6
Gulf States Util. Co	$6	107-1/8	5.6
" " " "	$5-1/2	106	5.2
Indianapolis P. & L. Co	6-1/2%	103-106	6.1
Jersey Central P. & L. Co	7%	100-1/2-103	6.8
" " " "	6%	90-92	6.5
" " " " "	5-1/2%	84-87-1/2	6.3
Kansas G. & E. Co	7%	111-1/2-116	6.0
Louisiana P. & L. Co	$6	98	6.1
Metropolitan Edison Co	$6	98-101-1/2	5.9
Minnesota P. & L. Co	$7	85-93	7.5
Mississippi River Pr. Co	6%	108-114	5.3
Nebraska Power Co	7%	110-1/4-115	6.1
New York P & L. Corp	7%	108-1/4-110	6.4
" " " "	6%	102-1/2-105	5.7
Northern Indiana P. S. Co	7%	95-1/4-101	6.9
" " " "	6%	85-89	6.7
Ohio Edison Co	$6	101-1/2	5.9
Ohio Power Co	6%	111	5.4
Ohio Pub. Ser. Co	7%	105-108-5/8	6.5
" " "	6%	96-1/4-99	6.1
Pacific G. & E. Co	6% (1)	30	5.0
" " " "	5-1/2% (1)	26-3/4	5.1
Pacific P. & L. Co	7%	80-82	8.5
Pennsylvania Edison Co	$2.8	36-40	7.0
" " "	$5	62-1/2-63	7.9
Pennsylvania P. & L. Co	$7	107-1/2	6.5
" " "	$6	105-106	5.7
Philadelphia Electric Co	$5	163-7/8	4.3
Public Service Co. of Colorado	6%	104-1/2	5.7
" " " "	7%	110-1/4-114	6.1
Public Service Co. of Oklahoma Prior Lien	7%	104-108	6.5
Public Service Co. Okla. Prior Lien	6%	94-1/2-98	6.1
Rochester G. & E. Corp	6% Series "C"	99-102	5.9
" " " "	6% Series "D"	99-101	5.9

2812

Company	Dividend Rate	Price 9/15/39	Page 2 Approx. Yield **
Sioux City G. & E. Co.	7%	91–95	7.4%
Southern Cal. Edison Co. (par $25)	6% Series "B"	27–5/8–28	5.4
" " " " " "	5–1/2% " "C"	26	5.3
Texas Pr. & Lt. Co.	7%	102–106	6.6
Toledo Edison Co.	7%	106–3/8–108	6.5
" " "	6%	100–101	5.9
West Texas Util. Co.	6%	89–1/2	6.7

** Yield computed on offering price where no sale was made (if none offered, bid price is used).

(I) Par $25.

GROSS OPERATING REVENUE AND TOTAL NET AVAILABLE FOR FIXED CHARGES AFTER DEPRECIATION
OF THE
GAS DEPARTMENTS OF THE THREE UTILITIES DISTRIBUTING GAS IN THE CHICAGO AREA

Exhibit 207

	Peoples Gas Light & Coke Company				Public Service Company of Northern Illinois (1)				Wester
	Gross Oper. Revenue		Net Available For Fixed Charges		Gross Oper. Revenue		Net Available For Fixed Charges		Gross
	Total	% of 1929-31 Avg.	Total	% of 1929-31 Avg.	Total	% of 1929-31 Avg.	Total	% of 1929-31 Avg.	Total
1929	$37,874,360.94	104.1	$ 9,323,887.20	98.8	$7,894,442.38	101.5	$1,847,348.97	93.4	$
30	36,221,839.82	101.2	9,684,521.85	101.4	7,963,136.97	102.4	2,047,450.42	103.5	
31	33,896,144.94	94.7	9,554,171.32	100.4	7,469,373.54	96.1	2,038,724.86	103.1	
32	33,471,455.09	93.5	7,210,425.09	75.9	7,074,694.41	91.0	1,565,841.93	79.1	4,027,755
33	30,298,121.82	84.6	4,991,445.14	52.6	6,632,876.72	85.3	1,742,054.23	88.1	3,748,414
34	32,771,690.75	91.5	3,683,713.86	38.8	7,197,034.15	92.6	1,185,951.53	60.0	4,035,067
35	34,409,963.44	96.1	3,937,072.58	41.5	7,833,694.30	100.7	1,370,362.81	69.3	4,356,844
36	36,668,847.25	102.4	3,899,322.20	41.1	8,439,377.92	108.5	973,297.55	49.2	4,455,085
37	36,761,189.56	102.7	4,246,144.91	44.7	9,131,935.10	117.4	1,488,490.47	75.3	4,399,252
38 (a)	37,976,206.82	106.1	6,010,614.17	63.3	9,061,442.75	116.5	1,294,595.72	65.5	4,442,023
(b)	35,308,835.82	98.6	3,870,313.17	40.8					

Notes:-

(1) Includes natural and mixed gas territories.
(2) Includes both northern and southern divisions.
(3) The Coal Products Manufacturing Company, a subsidiary supplying coalgas, was merged with Western United Gas and Electric Company on October 31, 1931. This means that comparative data on earnings can only be obtained from 1932 to date.
(a) Reflects the results of the rate increase.
(b) After deducting $2,667,371 from Gross Operating Revenue and $2,140,301 from Net Available for Fixed Charges as reported by the company to be the result of the rate increase.

Source of Data:-

Annual reports made by the companies to the Illinois Commerce Commission.

Exhibit 207

s Service Company of Northern Illinois (1)				Western United Gas & Electric Company (2) (3)			
Oper. Revenue		Net Available For Fixed Charges		Gross Oper. Revenue		Net Available For Fixed Charges	
al	% of 1939-31 Avg.	Total	% of 1939-31 Avg.	Total	% of 1938	Total	% of 1938
,442.32	101.5	$1,847,348.97	93.4	$		$	
,138.97	102.4	2,047,450.42	103.5				
,373.54	96.1	2,038,724.86	103.1				
,694.41	91.0	1,565,241.93	79.1	4,027,755.53	100.0	1,442,916.66	100.0
,876.72	85.3	1,742,054.23	88.1	3,748,414.15	93.1	1,251,714.09	86.7
,034.15	92.6	1,185,951.53	60.0	4,035,067.33	100.2	1,314,143.91	91.1
,694.30	100.7	1,370,362.81	69.3	4,356,844.14	108.2	1,214,254.92	84.2
,377.92	108.5	973,297.55	49.2	4,455,085.77	110.6	1,048,336.56	72.7
,935.10	117.4	1,488,490.47	75.3	4,399,252.55	109.2	1,047,678.93	72.6
,442.75	116.5	1,294,595.72	65.5	4,442,023.44	110.3	1,033,498.27	71.6

supplying coalgas, was merged with
ber 31, 1931. This means that comparative data on

nue and $2,140,301 from Net Available for Fixed
sult of the rate increase.

merce Commission.

2814

Federal Power Commission. Docket No.
Exhibit No. 208 (For Identification)
Federal Power Commission
Docket No. G-109 & G-112
Hearing Exhibit No. 208

Gas, Electric and Telephone Utility Companies Serving The City of Chicago.
Total Net Available for Fixed Charges after Depreciation.

Year	Peoples Gas Light and Coke Company		Commonwealth Edison Company		Illinois Bell Telephone Company	
	Net (1)	% of 1929–31 Average	Net (1)	% of 1929–31 Average	Net (1)	% of 1929–31 Average
1929	$ 9,821,861	94.9	$25,494,813	98.7	$18,543,228	102.0
1930	10,238,445	99.0	26,567,248	102.9	18,587,069	102.3
1931	10,976,726	106.1	25,397,934	98.4	17,383,325	95.7
1932	8,800,364	85.1	19,783,645	76.6	14,517,103	79.9
1933	6,316,995	61.1	18,426,931	71.4	13,419,084	73.8
1934	4,904,054	47.4	19,889,846	77.0	13,880,200	76.4
1935	4,962,780	48.0	19,993,700	77.4	13,618,427	74.9
1936	5,817,062	56.2	20,153,281	78.1	14,693,555	80.9
1937	5,766,347	55.7	23,952,001	92.8	15,160,007	83.4
1938(a)	7,429,902	71.8	27,704,079	107.3	12,878,812	70.9
(b)	5,289,601	51.1				

Note:—(1) Net available for fixed charges after depreciation.

(a) Reflects the results of the rate increase.

(b) After deducting $2,140,301 reported by the company to be the result of rate increase.

Source of data:—Moody's Public Utilities Manual, 1934–1937–1939 editions.

BONDS, DEBENTURES AND NOTES OF NATURAL GAS COMPANIES
HOLDINGS BY PUBLIC

Exhibit 209

Company	Issue	Total Outstanding	Interest	Earnings Available (1)	Times Earned	Fixed Capital i.e. Plant Account	% of Funded Debt to Fixed Capital	(7) Market 9/30/39	AP Ti Ma
Houston Gulf Gas Company	1st & Collateral 6%, 4/1/43	$4,238,000	$ 254,280	$ 770,145(5)	3.03	$ 18,236,807	23.24	$103.63	3-1
" " " "	Conv. Debs. 6-1/2%, 4/1/43	1,920,000	120,240		2.06		33.38	101.75	3-1
	All fixed charges		394,644		1.30		43.80		
Lone Star Gas Company	Mortgage Note			No earnings statement available					
Oklahoma Natural Gas Company	1st Mtg. & 3-3/4%, 8/1/56 (2)	17,000,000	637,500	2,891,810(2)	4.55	45,793,738(5)	38.80	102.50	16 Y
	All fixed charges		889,218		3.25		57.15		
Panhandle Eastern Pipe Line Co.	1st Mtg. A. 4%, 3/1/65	33,618,000	925,298	3,164,715(4)	3.42	58,710,830	59.4	104.19	18-1
	All fixed charges		1,280,185		4.05		89.4		
Southern Natural Gas Co.	1st Mtg.S.F. 4-1/2%, 10/1/61	18,918,000	(807,050	(2,577,929(4)	4.24	30,282,281	(44.6	104.00	12 Y
" " " "	1st Mtg.S.F. 4-1/2%, 1962	972,000	(	(			(		
" " " "	Adjustment Mtg. 6%, 1/1/60	5,771,884	344,291		2.70		65.6	96.50	20-1
	All fixed charges		1,337,510		1.92				
Sub-Total		25,361,884		11,454,597		181,085,697			
	On 1st Mtg. issues		2,434,068		4.68				
	All fixed charges		4,101,375		2.78				
Southern California Gas Co.	1st Mtg. & Ref. 4%, 8/1/65	15,000,000	600,000	(7,682,378(4)	(6.80	129,654,610	(21.8	106.75	26 Y
" " " "	1st Mtg. & Ref. 4-1/2%, 3/1/61	12,800,000	562,500	(	(		(	107.13	20-1
	All fixed charges		1,400,468		5.48		21.8		
Southern Counties Gas Co.	1st Mtg. 4-1/2%, 5/1/68	11,800,000	517,500	2,082,367(4)	4.02	30,749,976	37.4	104.75	28-1
	All fixed charges		557,817		3.75		37.4		
Sub-Total		38,800,000		9,765,185		160,404,586			
	On 1st Mtg. issues		1,680,000		5.81				
	All fixed charges		1,958,809		4.98				
Total		104,361,884		21,169,782		341,490,283			
	On 1st Mtg. issues		4,114,068		5.10				
	All fixed charges		6,059,874		3.48				

(1) Latest earnings published prior to September 30, 1939.
(2) These bonds were issued in August, 1939. Earnings are based on Proforma earnings statement for 12 months ended August 31, 1939.
(3) Does not include Franchises Carried at $13,397,475.
(4) Twelve months ended June 30, 1939.
(5) Twelve months ended December 31, 1938.
(6) Approximate yields to maturity in Sub-Total and Total lines has been weighted by using the outstanding amounts shown.
(7) Last sale price on 9/30/39 or if no sale on that day, the mean of the bid and ask prices on that day.

Earnings Available (1)	Times Earned	Fixed Capital i.e. Plant Account	% of Funded Debt to Fixed Capital	(7) Market 9/30/38	Approx. Time to Maturity	Approx. Yield to Maturity %
770,148(5)	3.03	$ 18,238,807	23.24	$103.63	3-1/2 Yrs.	4.85
	2.06		35.38	101.75	3-1/2 Yrs.	5.94
	1.30		43.80			
ings statement available						
2,891,810(2)	4.55	43,793,739(3)	38.80	102.50	16 Yrs.	3.85
	3.26		57.15			
3,164,715(4)	5.52	28,710,630	39.4	104.19	18-1/2 Yrs.	3.58
	4.05		39.4			
2,577,329(4)	4.24	30,382,281	(44.4	104.00	18 Yrs.	4.08
			(			
	2.70		63.6	96.50	20-1/4 Yrs.	6.31
	1.92					
1,404,597		181,065,697				4.05 (6)
	4.63					
	2.78					
7,682,573(4)	(6.60	129,654,610	(21.2	106.75	25 Yrs.	3.60
	(		(	107.13	20-1/2 Yrs.	3.99
	5.49		21.2			
2,082,587(4)	4.02	30,748,976	37.4	104.75	28-1/2 Yrs.	4.21
	3.75		37.4			
3,765,185		160,404,586				3.99 (6)
	5.51					
	4.98					
1,161,765		211,435,245				4.00 (6)
	3.10					
	3.48					

ment for 12 months ended August 31, 1938.

the outstanding amounts shown.
s on that day.

PREFERRED STOCKS OF NATURAL GAS COMPANIES
HOLDINGS BY PUBLIC

Exhibit 209

Company	Issue	Total Outstanding	Dividend Requirements	Earnings Available for Dividends(1)	Times Dividend Requirements Earned	Times Fixed Charges and Dividend Requirements Earned	Market 9/30/39(2)	Approximate Yield
El Paso Natural Gas Company	7% Cum. Pfd. Par $100	$ 1,479,700	$ 103,579	$ 2,365,241(3)	22.8	5.74	108(4)	6.48
Houston Gulf Gas Company	7% Cum. Pfd. Series A Par $100	806,200	56,441	175,086(5)	1.09	1.02	(6)	—
" " " "	7% Cum. Pfd. Series B Par $100	1,500,000	105,000					
Oklahoma Natural Gas Company	$5.50 Conv.Prior Pfd. Par $100	5,800,000	319,000	2,008,583(7)	6.26	2.39	105.25	5.25
" " " "	$3.00 Second Pfd. Par $50	4,553,300	273,198	1,683,593	6.15	1.96	42.88	7.00
		10,353,300	592,198	3,692,593	5.97	1.95		
Sub-Total		14,139,200	897,170	4,243,919	5.29	1.54		5.05
Southern California Gas Co.	6% Cum.Pfd. Par $25	3,998,900	239,934	(6,888,096	4.44	2.75	30.50	4.92
" " " "	6% Cum.Pfd. Series A Par $25.	19,575,800	1,174,548				30.50	4.92
		23,574,700	1,414,482	6,888,096	4.44	2.75		4.92
Total		37,713,900	2,311,652	10,888,015	4.76	2.54		5.00

Approximate yield figures on Sub-Total and Total lines have been weighted by the principal amounts outstanding.

(1) Latest earnings published prior to 9/30/39.
(2) Last sale on 9/30/39, or if no sale on that date the mean of the bid and ask prices.
(3) Twelve months ended July 31, 1939.
(4) Bid price - none offered.
(5) Twelve months ended December 31, 1938.
(6) All of these preferred stocks except $12,100 par amount are owned by the parent company and hence no quoted market prices are available.
(7) Proforma earnings and dividend requirements - Twelve months ended August 31, 1939.

COMMON STOCKS OF NATURAL GAS COMPANIES HOLDINGS BY PUBLIC

Company	Total Outstanding Shares	Total Outstanding Amount	Par Value	Latest Earnings Per Share(1)	Per Share Dividends Paid	Market quotation 9/30/39 (2)	Percent Earnings to Latest Quotations
El Paso Natural Gas Company	600,348	$1,801,044	$ 3.00	$3.77 (3)	$2.00	$38.75	9.75
Houston Gulf Gas Company	317,008	5,170,080	no par	.05 (4)		(5)	—
Interstate Natural Gas Company	952,955	8,589,530	no par	2.13 (4)	1.75	24.50	8.70
Manufacturers Light & Heat Co.	450,608	22,530,400	50.00			(5)	—
Memphis Natural Gas Company	918,680	4,593,400	5.00	.55 (4)	.45	4.69	11.71
Mountain Fuel Supply Company	1,999,902	19,999,020	10.00	.38 (4)	.25	4.81	7.90
Oklahoma Natural Gas Company	549,984	8,249,760	15.00	2.56 (6)	.75 (7)	15.50	16.50+
Southern Natural Gas Company	691,970	5,189,775	7.50	1.79 (8)	.50 (9)	13.75	13.00+
Sub-Total		75,963,037					10.45 (10)
Indian Territory Illuminating Oil Co.				(4)			
Class "A"	1,304,600	1,304,600	1.00	(03)	—	1.75	—
Class "B"	7,090,037	7,090,037	1.00	(03)	—	1.69	—
South Penn Oil Company	1,000,000	25,000,000	25.00	1.44 (4)	1.75	39.00	3.69
Sub-Total		33,394,637					3.69
Total		$107,357,664					8.20 ~~10.34~~ (10)

( ) Denotes deficit.

(1) Latest earnings published prior to 9/30/39.
(2) Last sale price on 9/30/39; or if no sale on that date, the mean of the bid and ask prices.
(3) Twelve months ended July 31, 1939.
(4) Twelve months ended December 31, 1938.
(5) Parent company owns all but very few shares - no market prices available.
(6) Proforma earnings - Twelve months ended August 31, 1939.
(7) Paid $0.25 quarterly Jan 1 to Sept. 30, 1939.
(8) Twelve months ended June 30, 1939.
(9) Initial dividend of $0.50 per share paid on new stock June 30, 1939.
(10) Weighted average based on total market value of shares and only on stocks with earnings.

2819 (Revision of Pg. 1, Exhibit 141) Federal Power Commission. Docket No.
Exhibit No. 210 (For Identification)

Natural Gas Pipeline Company of America and Texoma Natural Gas Company
(Combined)

Earnings Statement Based on Book Cost as of January 1, 1939.

Line Number		As of Jan. 1, 1939	Total 1938–1954	Average 1939–1954
	Revenue			
1	From Domestic Sales	$ —	$164,835,603	$ 10,302,225
2	From Industrial Sales	—	46,190,085	2,886,880
3	From Texoma Field Sales	—	256,591	16,037
4	Total Gas Sales	—	$211,282,279	$ 13,205,142
5	From Gasoline Sales	—	8,974,017	560,876
6	From Other Operating Income	—	193,531	12,096
7	Total Revenue	—	$220,449,827	$ 13,778,114
	Operation and Maintenance			
8	Operation Expenses	—	$ 80,994,386	$ 5,062,149
9	Company Used Gas (deduct)	—	6,272,871	392,054
10	Maintenance Expense	—	13,785,303	861,581
11	Maintenance Contingencies (10%)	—	1,378,533	86,158
12	Net Operation and Maintenance	—	$ 89,885,351	$ 5,617,834
13	Revenue Remaining for Replacements, Amortization and Return	—	$130,564,476	$ 8,160,280
	Reserve for Replacements			
14	Capital Expenditure for Replacements	—	$ 3,105,244	$ 194,078
15	Cost of Retiring Capital Replaced	—	109,449	6,841
16	Salvage Value of Retirements (deduct)	—	541,253	33,828
17	Replacement Contingencies (10%)	—	267,346	16,709
18	Total of Reserve for Replacements	—	$ 2,940,786	$ 183,800
19	Capital Expenditures per Books, excluding Gas Reserves	$ 49,830,479		
20	Viewed Depreciation (deduct)	2,485,079		
21	Cost of Gas Reserves less Depletion to January 1, 1939	12,402,884		
22	Cost of Additional Property	—	$ 9,338,983	—
23	Going Concern Value	8,500,000	—	—
24	Working Capital	975,000	—	—
25	Total	$ 69,223,284	$ 78,562,267	—
26	Total Rate Base	—	—	$ 75,305,459
27	Liquidating Salvage Value of			
28	(a) Capital Expenditure	—	$ 457,452	
29	(b) Warehouse Stocks	—	24,314	—
30	(c) Working Capital Cash	—	567,366	—
31	Total Liquidating Salvage Value	—	$ 1,049,132	—
32	Total to be Amortized	—	$ 77,513,135	—
33	Amortization Allowance (Sinking fund, 2% interest compounded semi-annually)	—	66,152,816	$ 4,134,551
34	Revenue Remaining for Return	—	61,470,874	$ 3,841,929
35	Rate of Return			5.10%

Federal Power Commission
Docket No. G-109 & G-112
Hearing Exhibit No. 210

Exhibit No. 211.

2820 Revision of p. 1 of Ex. 142

Federal Power Commission. Docket No.
Exhibit No. 211 (For Identification)

Federal Power Commission
Docket No. G-109 & G-112
Hearing Ex. No. 211

Natural Gas Pipeline Company of America and Texoma Natural Gas Company

(Combined)

Earnings Statement Based on Reproduction Cost New
Less Existing Depreciation as of June 1, 1939

Line Number		As of June 1, 1939	Total 6-1-39 to 12-31-54 Inclusive	Average Yearly 6-1-39 to 12-31-54 Inclusive
	Revenue			
1	From Domestic Sales	$	$160,370,063	$ 10,291,127
2	From Industrial Sales		44,811,352	2,875,595
3	From Texoma Field Sales		247,567	15,887
4	Total Gas Sales		$205,428,982	$13,182,609
5	From Gasoline Sales		8,698,468	558,190
6	From Other Operating Income		190,161	12,203
7	Total Revenue		$214,317,611	$13,753,002
	Operation and Maintenance			
8	Operation Expense		$ 79,054,616	$ 5,073,023
9	Company Used Gas (deduct)		6,107,808	391,945
10	Maintenance Expense		13,536,004	868,620
11	Maintenance Contingencies (10%)		1,353,603	86,862
12	Net Operation and Maintenance		$ 87,836,415	$ 5,636,560
13	Revenue Remaining for Replacement, Amortization and Return		$126,481,196	$ 8,116,442
	Reserve for Replacements			
14	Capital Expenditure for Replacements		$ 3,086,671	$ 198,075
15	Cost of Retiring Capital Replaced		109,063	6,999
16	Salvage Value of Retirement (deduct)		531,642	34,116
17	Replacement Contingencies (10%)		266,411	17,096
18	Total of Reserve for Replacements		$ 2,930,503	$ 188,054
19	Reproduction Cost New Excluding Gas Reserves	$ 56,302,250	$ —	$ —
20	Viewed Depreciation (deduct)	2,866,758	—	—
21	Value of Gas Reserves	13,334,775	—	—
22	Cost of Additional Property	—	$ 9,145,083	—
23	Going Concern Value	8,500,000	—	—
24	Working Capital	975,000	—	—
25	Total	$ 76,245,267	$ 85,390,350	—
26	Total Rate Base	—	—	$ 82,291,553
27	Liquidating Salvage Value of			
28	(a) Capital Expenditure	—	$ 457,452	—
29	(b) Warehouse Stocks	—	24,314	—
30	(c) Working Capital Cash	—	567,363	—
31	Total Liquidating Salv. Value	$ —	$ 1,049,132	—
32	Total to be Amortised	$	$ 84,341,218	$ —
33	Amortization Allowance (Sinking fund, 2% interest compounded semi-annually)	—	$ 72,304,635	$ 4,639,909
34	Revenue Remaining for Return	—	$ 51,246,068	$ 3,288,119
35	Rate of Return			4.00%